



The Proceedings of 10<sup>th</sup> ICADA 2021

# THE 10<sup>th</sup> ICADA 2021—SSIS

THE TENTH INTERNATIONAL CONFERENCE ON ADVANCEMENT OF  
DEVELOPMENT ADMINISTRATION 2021—SOCIAL SCIENCES AND  
INTERDISCIPLINARY STUDIES

Theme: “Stronger Emergence Through Disruption:  
Challenge and Opportunity”

National Institute of Development Administration (NIDA) Bangkok, THAILAND

▶ Live streaming online via ZOOM program



[www.icada2021.nida.ac.th](http://www.icada2021.nida.ac.th)  
[www.nida.ac.th](http://www.nida.ac.th)

ISBN : 978-616-482-088-3

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1. THE INFLUENCE OF CULTURAL INTELLIGENCE, SOCIAL ANXIETY, AND GLOBAL LEADERSHIP ON CROSS-CULTURAL ADJUSTMENT OF EMPLOYEE IN A PRIVATE HOTEL BUSINESS AT THE BANGKOK METROPOLITAN  
*By Wornphien, Nopporn and Akakulanan, Sayamon, Ph.D.*
2. MEDIA CONTENT AND ONLINE AUDIENCE ENGAGEMENT PRACTICES ON YOUTUBE: CONTENT ANALYSIS OF 80 VIDEOS BY TOP YOUTUBE FOREIGN INFLUENCERS IN CHINA  
*By Huang, Zixuan and Limkangvanmongkol, Vimviriya, Ph.D.*
3. SELLING BEAUTY ON WEIBO: CONTENT ANALYSIS OF SHORT VIDEOS' ADVERTISING STRATEGIES, ADVERTISING APPEALS, AND ADVERTISING EXECUTIONS  
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**The Proceedings of the 10<sup>th</sup> ICADA 2021**  
**“Stronger Emergence Through Disruption: Challenge and Opportunity”**

Publisher's Name:

National Institute of Development Administration (NIDA)  
148 Serithai Road, Klongchan, Bangkok, 10240 THAILAND  
Tel: (66)2 727-3300, (66)2 727-3312  
E-mail: [icada4papers@gmail.com](mailto:icada4papers@gmail.com), [nidaconference@nida.ac.th](mailto:nidaconference@nida.ac.th)  
Website: <http://icada2021.nida.ac.th>

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ISBN (e-book): 978-616-482-088-3

First Edition 2021

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# **THE INFLUENCE OF CULTURAL INTELLIGENCE, SOCIAL ANXIETY, AND GLOBAL LEADERSHIP ON CROSS-CULTURAL ADJUSTMENT OF EMPLOYEE IN A PRIVATE HOTEL BUSINESS AT THE BANGKOK METROPOLITAN<sup>1</sup>**

by

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## **ABSTRACT**

The objectives of this research were to study: 1) the level of cultural intelligence, social anxiety, global leadership, and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan and 2) the influences of cultural intelligence, social anxiety, global leadership, on cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan. The sample group consisted of 212 employees in a private hotel business at the Bangkok metropolitan. Were examined a series of questionnaires were used as a research tool to collect data while statistics were applied to the analysis, including percentage, mean, standard deviation, Pearson's product moment correlations, and stepwise multiple regression analysis.

The results of the research had shown the following: 1) Level of cultural intelligence of employee in a private hotel business at the Bangkok metropolitan in overall and each component was at a high level. (Motivation, Cognition, Metacognition, and Behavior). Social anxiety in overall and each dimension was at a low level. (Social Apprehension, Heightened Self-Focused Attention, Anticipation of Social Mishap, and Avoidance and Safety Behaviors) Global Leadership in overall and each element was at a very high level. (Global Knowledge, Threshold Traits, Attitudes and Orientation Global Mindset, Interpersonal Skills, and System Skills). Cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan in overall and each component was at a high level. (General Adjustment, Interaction Adjustment, and Work Adjustment) According to a hypothesis testing, furthermore, the result illustrated that 2) Global leadership and cultural intelligence could jointly predict the cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan up to 16.7 percent at the .001 level of significant.

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<sup>1</sup> Top Paper Award 2021

**KEY WORDS:** Cross-Cultural Adjustment, Cultural Intelligence, Global Leadership, Social Anxiety

### **SIGNIFICANT OF THE PROBLEM**

Culture is a symbol of civilization. It is used to identify elements that represent the distinctiveness of people and social groups. This includes the lifestyle, thoughts, beliefs, values, customs, traditions, rituals, and wisdom of any particular society. These cultural traits have been created, ingrained, cultivated, inherited, learnt, improved, and modified by individuals and society in order to prosper both spiritually and materially; in a peaceful and sustainable way. (Ministry of Culture, 2010) This includes the evolutionary intelligence of mankind within a society.

Nowadays, within the context of cultural diversity, societies have differentiations in social identities within their population. When a society is filled with diversity, humans adopt new learning behaviors and organize in order to adapt to the rapid changes in culture and technology. This makes any organization's operations face more competition. Thus, organizations have to seek new approaches and strategies through utilizing technology management (Samrong, 2009). Technology management can be used as a tool for personnel to adjust, grow, and learn. This can be accomplished while improving existing structures in order to fit within the context of social environment and cultural diversity. This allows an organization to “catch up” with modern society so that individuals can thrive within an emerging and changing culture. (Paiboonwattanakit, 2017)

The establishment of the ASEAN in Southeast Asia ensures an influx of people, from different cultures, between countries. (Public Relations Group; Office of the Minister, 2015) Due to this influx, any person, who desires to successfully survive in these changing social conditions, needs to develop their own knowledge, ideas, and abilities in order to cope. In particular, one of the significant concepts of cultural adjustment is Cultural Intelligence (Cultural Quotient: CQ). Cultural Intelligence helps to ensure cultural adjustment is effective when adjusting to cultural diversity in a multicultural society. Learning to become culturally aware, according to Dyne et al (2008), is called cultural intelligence.

When cultural intelligence is present within a multicultural society, we can encounter any social issues or circumstances properly and decrease our stress and social anxiety. The research work of Hofmann et al. (2014) stated that stress arises from novel social situations in which a person is unable to cope. If the person understands cultural diversity, this will lead to cultural communication, which will result in the state of cultural perception and awareness. This state is called Global Leadership. (Osland et al., 2013)

Finally, technological changes during this era of innovation will inevitably require everyone to learn to adapt with Cross-Cultural Adjustment and live happily under a variety of cultural differences. (Black and Gregersen, 1991).

### **OBJECTIVE**

The objective of this research was to study.

1. The level of cultural intelligence, social anxiety, global leadership, and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan
2. The influences of cultural intelligence, social anxiety, global leadership, and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan.

### **LITERATURE REVIEW**

The researcher conducted research regarding the influences of cultural intelligences, social anxiety, global leadership, and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan. This was done through studying the following research documents, applied concepts, and other theories:

#### **Cross-Cultural Adjustment (CCA)**

Cross-cultural adjustment was framed and contextualized under the concept of Black and Gregersen (1991). This concept theorizes that individuals adapt their behaviors and actions amid changes in technological advancement, innovation, communication through learning and understanding the diversity of surrounding people. The changes in behaviors can be categorized into 3 components as follows:

1. General Adjustment refers to an individual's behaviors that can change actions or the conduct of one's own activities, for instance, travelling, food, purchase, air, healthcare, residence, cost of living in daily life.
2. Interaction Adjustment refers to changes in an individual's behavior when communicating with people from a different culture or environment. These changes are enacted with the goal of communicating with people from different cultures or environments properly.
3. Work adjustment refers to an individual changing behavior, actions, or conduct within their work duties, or adapting to perform duties, so that they are able to work with people from different cultures.

#### **Cultural Intelligence (CQ)**

Cultural Intelligence, studied according to the concept of Dyne et al. (2008), refers to an individual's abilities to learn, accept, and understand language diversities and expressions that are different from their own. Cultural Intelligence also includes adapting to changes in technological advancement and innovation in a diverse society. Cultural Intelligence can be categorized into 4 components as follows:

1. Motivation refers to a state in which individuals, amid the changes in society, are determined to learn, accept and understand diversities that are ingrained in individuals from other societies. These come from an employee's internal interests and also the external environment.
2. Cognition refers to a state when individuals are culturally informed through studying and understanding cultures. These individuals recognize the value of diversity in all individuals within the context of a changing society.
3. Metacognition refers to the state that individuals are able to apply what they learnt to manage, plan, and improve their work amid cultural diversity and changes in technological advancement, innovation, and communication.
4. Behavior refers to the employees' ability to communicate and express themselves through gestures toward people from other societies. In doing so, collaboration between employees and people from other societies becomes efficient.

## **Social Anxiety (SA)**

Social Anxiety, which is studied by the concept of Hofmann et al. (2014), refers to intense stress that some individuals experience when interacting with colleagues, or when being exposed to people from different cultures in work and daily life. This stress can lead to different expressions and behavior which can be divided into 4 dimensions as follows:

1. Social Apprehension refers to the condition of paranoia, or stress, humans experience when exposed to new environments, people, or events which can cause insecurity in communication, work, and even daily life.
2. Heightened Self-Focused Attention refers to the state in which individuals experience paranoia and stress due to pressure from colleagues, surrounding people, or others with whom they communicate. This can cause insecurity in their self-expressions.
3. Anticipation of Social Mishap refers to a stressed state due to a paranoid condition. An individual experiences this condition when exposed to various negative feedback from colleagues and the people around them. This negative feedback may or may not be related to the individual. This causes insecurity in expressions, work, and daily life.
4. Avoidance and Safety Behaviors refers to behaviors that individuals enact due to stress from colleagues, people around them, as well as those who come in contact and coordinate with them. Due to stress the individual will avoid social situations.

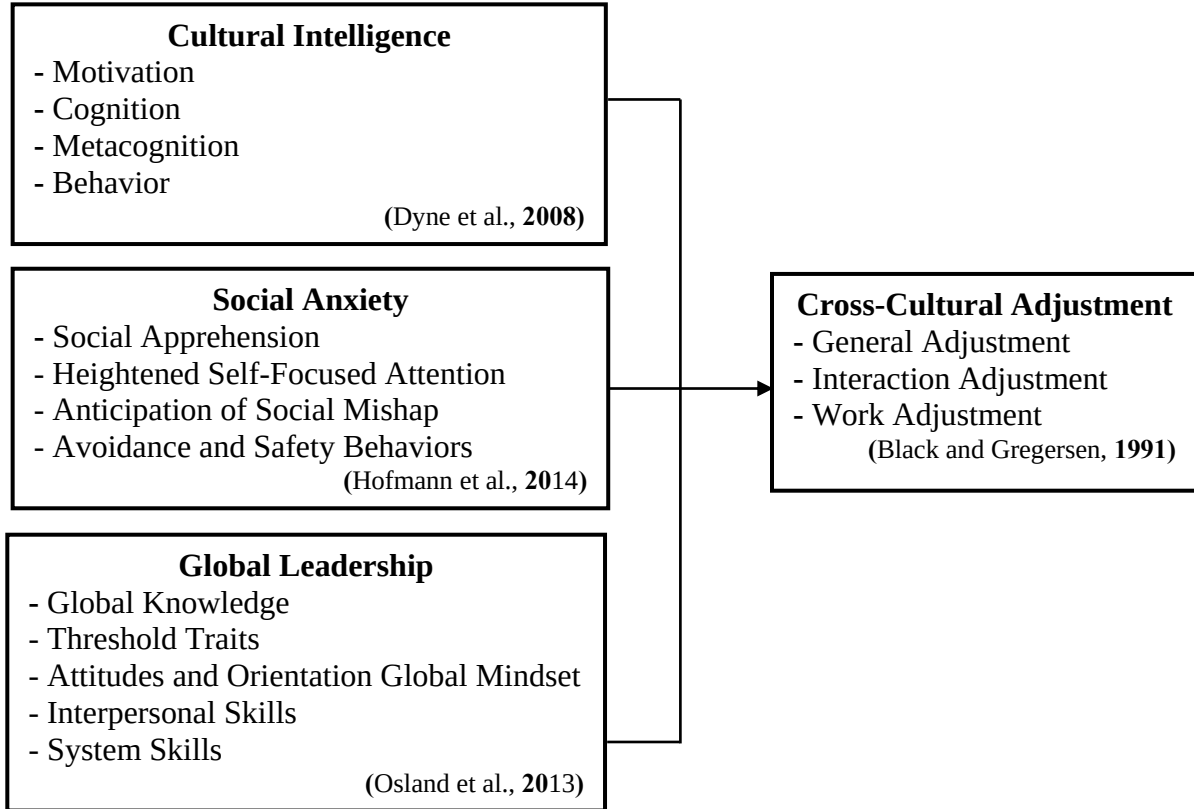
## **Global Leadership (GL)**

Global Leadership, according to the concept of Osland et al (2013), refers to an individual's abilities to cope with any issues upon considering diverse cultures. As such, individuals are able to perform their work smoothly amid the cultural changes in order to achieve targets. Global Leadership can be categorized into 5 elements as follows:

1. Global Knowledge refers to an individual's ability to recognize changes occurring in current society through direct experience or through studying technology, innovation, news, languages, and culture.
2. Threshold Traits refers to a person whose personality and expressions indicate honesty, humility, inquisitiveness and flexibility amid changing societal conditions in technological advancement, innovation, and social communication.
3. Attitudes and Orientation Global Mindset refers to individuals who are confident, have positive feelings toward changes, and use information gained by researching changes occurring in society to improve behavior. These individuals tend to be well-behaved when working and living with people from other societies or cultures.
4. Interpersonal Skills refers to the ability of individuals to express themselves accurately and to understand other people in a creative way. These individuals are able to build trust with people from different cultures and other societies; even amid changing conditions in technological advancement and social innovations.
5. System Skills refers to the ability of a person to demonstrate honest, credible, and moral behaviors through applying personal knowledge. This is done in order to convince individuals of the importance of cultural diversity in improving operational style, communication, collaboration, and innovation within the objective of achieving goals.

The researcher studied the aforementioned concepts and wrote a research conceptual framework as follows:

**FIGURE 1:** Conceptual framework for research



## RESEARCH METHODOLOGY

### Population and Samples

This research population group are employees in a hotel in Bangkok metropolitan. This hotel is registered with Thai Hotels Association. Furthermore, this research sample size was determined by using the sample size's estimation table of Krejcie and Morgan (Krejcie and Morgan, 1970 cited in Hiranwong, 2017), at tolerance value of 0.5, or the acceptable sample size that can be used as a representation of the population as equal as 212 persons. The acceptable sample size is sufficient to represent the population of 212.

### Research tools

This research has used questionnaires as a tool. Specifically, this questionnaire is divided into 5 sections; the first section is in regards to general information relating to the respondents. The second section is a questionnaire for evaluating cultural intelligence in accordance with the concept of Dyne et al (2008). The third section is the questionnaire for evaluating social anxiety in accordance with the concept of social anxiety of Hofmann et al. (2014). The fourth section is the questionnaire for evaluating global leadership in accordance with the concept and the theory of Osland et al. (2013). The fifth section is ques-

tionnaire for evaluating cross-cultural adjustment according to the concept and the theory of Black and Gregersen (1991). All questions are rating scale-questions which have 5 choices.

### Data Collection Methods

This research used a sample group with the Proportional Stratified Random Sampling from each department of employees in this hotel as seen below:

Size of sample group in each department =

$$\frac{(\text{Size of all sample group}) \times (\text{Size of population in each department})}{\text{Total number of the population}}$$

Afterwards, the researcher utilized the Sample Random Sampling to sample the name list of employees in each department in order to collect information online via Google Form. This tool was verified in terms of Content Validity from faculty, experts. It was also morally verified from Human research under the Personal Data Protection Act B.E. 2562 (2019) and in accordance with policies of research ethics in mental health and psychiatry at the Department of Mental Health and the Research and Development Institute of Kasetsart University. This was all done before any actual data was collected.

### Quality inspection of research tools

The quality of the questionnaire used in the experiment was determined by analyzing the computer program. The credibility of the whole tool was established by finding Cronbach's Alpha Coefficient, the criteria used for consideration are .80-.89, which is good, and .90 and above is considered to be excellent (Srisathitnaraakul, 2010). The determination of classification power was also applied. This was done by finding the relationship between an item and total score on each side (Corrected Item-Total Correlation). The criteria used for consideration was above .20 (Kitpreedasudrit, 2006). In case of individual questions, the elimination of questions with "r" values lower than .361 was enacted based on the acceptable criteria from the Critical Values of Pearson Product Moment Correlation Coefficient table in case of a tried-out sample group of 50 people, whose significant statistic was at .05 (Sayyod and Sayyod, 2009). Furthermore, these individual questions are used. When analyzing the credibility value of the questionnaire, the details are as follows:

1. The Cultural Intelligence Questionnaire has 22 questions. The item-total correlation value was at .956 and corrected item-total correlation was at .583-.759. When analyzing the credibility value of Cronbach's Alpha, the details are as follows:

**TABLE 1.** The cultural intelligence reliability.

| Cultural Intelligence |                 |
|-----------------------|-----------------|
| Components            | Reliability (r) |
| 1. Motivation         | .897            |
| 2. Cognition          | .851            |
| 3. Metacognition      | .887            |
| 4. Behavior           | .856            |

2. The Social Anxiety Questionnaire has 24 questions. The item-total correlation value was at .897 and corrected item-total correlation was at .365-.602. When analyzing the credibility value of Cronbach's Alpha, the details are as follows:

**TABLE 2.** The social anxiety reliability.

| <b>Social Anxiety</b>                |                        |
|--------------------------------------|------------------------|
| <b>Dimensions</b>                    | <b>Reliability (r)</b> |
| 1. Social Apprehension               | .712                   |
| 2. Heightened Self-Focused Attention | .725                   |
| 3. Anticipation of Social Mishap     | .771                   |
| 4. Avoidance and Safety Behaviors    | .755                   |

3. The Global Leadership Questionnaire has 28 questions. The item-total correlation value was at .929 and corrected item-total correlation was at .369-.665. When analyzing the credibility value of Cronbach's Alpha, the details are as follows:

**TABLE 3.** The global leadership reliability.

| <b>Global Leadership</b>                    |                        |
|---------------------------------------------|------------------------|
| <b>Elements</b>                             | <b>Reliability (r)</b> |
| 1. Global Knowledge                         | .808                   |
| 2. Threshold Traits                         | .804                   |
| 3. Attitudes and Orientation Global Mindset | .636                   |
| 4. Interpersonal Skills                     | .775                   |
| 5. System Skills                            | .755                   |

4. The Cross-Cultural Adjustment Questionnaire has 30 questions. The item-total correlation value was at .864 and corrected item-total correlation was at .416-.741. When analyzing the credibility value of Cronbach's Alpha, the details are as follows:

**TABLE 4.** The cross-cultural adjustment reliability.

| <b>Cross-Cultural Adjustment</b> |                        |
|----------------------------------|------------------------|
| <b>Components</b>                | <b>Reliability (r)</b> |
| 1. General Adjustment            | .864                   |
| 2. Interaction Adjustment        | .869                   |
| 3. Work Adjustment               | .879                   |

### **Statistics used in data analysis**

The researcher analyzed the collected data through a software package, used for social science research, by using the following statistical values:

1. Descriptive Statistics are used to describe basic information of a study through analyzing the fundamental data of the sample group. This includes the percentage for analyzing



individual factors of a sample group, the mean for interpreting meaning of any data, and standard deviation of the mean to show data distribution.

2. The relationship between variables is analyzed by Pearson's Product-Moment Correlation Coefficient. It is used to analyze the impact of 1 dependent variable, which is the result of 2 independent variables, through a computer program. This program is used for analyzing social science data and testing the hypothesis of this research. The researcher set the level of statistical significance at .05.

3. Multiple Regression Analysis is used to forecast 1 dependent variable. This was a result of two or more independent variables by using a stepwise regression analysis method of a computer program to analyze social science data.

## RESULTS

The research regarding cultural intelligence, social anxiety and global leadership affects the cross-cultural adjustment of a hotel business employees in Bangkok Metropolitan can be summarized as follows:

**Section 1** The analysis of the level of cultural intelligence, social anxiety, global leadership, and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan.

**TABLE 5.** Mean, Standard Deviation, of cultural intelligence, global leadership, social anxiety, and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan.

| Variable                                    | Mean        | S.D.       | Level            |
|---------------------------------------------|-------------|------------|------------------|
| <b>Cultural Intelligence</b>                | <b>4.06</b> | <b>.66</b> | <b>High</b>      |
| 1. Motivation                               | 4.02        | .79        | High             |
| 2. Cognition                                | 4.07        | .76        | High             |
| 3. Metacognition                            | 4.05        | .72        | High             |
| 4. Behavior                                 | 4.11        | .67        | High             |
| <b>Social Anxiety</b>                       | <b>2.29</b> | <b>.34</b> | <b>Low</b>       |
| 1. Social Apprehension                      | 2.03        | .42        | Low              |
| 2. Heightened Self-Focused Attention        | 2.53        | .50        | Low              |
| 3. Anticipation of Social Mishap            | 2.42        | .46        | Low              |
| 4. Avoidance and Safety Behaviors           | 2.20        | .39        | Low              |
| <b>Global Leadership</b>                    | <b>4.28</b> | <b>.44</b> | <b>Very high</b> |
| 1. Global Knowledge                         | 4.29        | .54        | Very high        |
| 2. Threshold Traits                         | 4.30        | .46        | Very high        |
| 3. Attitudes and Orientation Global Mindset | 4.29        | .48        | Very high        |
| 4. Interpersonal Skills                     | 4.30        | .52        | Very high        |
| 5. System Skills                            | 4.26        | .64        | Very high        |
| <b>Cross-Cultural Adjustment</b>            | <b>4.10</b> | <b>.61</b> | <b>High</b>      |
| 1. General Adjustment                       | 4.14        | .63        | High             |
| 2. Interaction Adjustment                   | 4.07        | .66        | High             |

The table 5 demonstrates that the overall cultural intelligence was high. The mean was 4.06. Considering each aspect, it was found that of employee in a private hotel business at the Bangkok metropolitan had cultural intelligence. The components of behavior, cognition, metacognition, and motivation was at a high level as well. The mean was 4.11, 4.07, 4.05, and 4.02 respectively.

In terms of social anxiety, it was found that of employee in a private hotel business at the Bangkok metropolitan had a low level of overall social anxiety. The mean was 2.29. When considering each aspect, it was found that employee in a private hotel business at the Bangkok metropolitan had relatively low in the dimensions of heightened self-focused attention, anticipation of social mishap, avoidance and safety behaviors, and social apprehension. The average values were 2.53, 2.42, 2.20, and 2.03 respectively.

Moreover, it was found that of employee in a private hotel business at the Bangkok metropolitan had a high level of global leadership with an average value of 4.28. When considering each aspect, it was found that an employee in a private hotel business at the Bangkok metropolitan had threshold traits in terms of characteristics, interpersonal skills, global knowledge, attitudes and orientation global mindset, knowledge of globalization, attitude, and conceptualization of system skills at a very high level. The mean values were 4.30, 4.30, 4.29, 4.29 and 4.26, respectively.

In addition, it was found that of employee in a private hotel business at the Bangkok metropolitan had a high level of overall cross-cultural adjustment with a mean of 4.10. When considering each aspect, it was found that an employee in a private hotel business at the Bangkok metropolitan showed cross-cultural adjustment in terms of general adjustment, work adjustment, and interaction adjustment at a high level as well. The mean values were 4.14, 4.09 and 4.07, respectively.

**Section 2** The correlation analysis results of the cultural intelligence, social anxiety, global leadership and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan.

Correlation analysis was conducted to confirm the relationship and direction among of cultural intelligence, global leadership, and social anxiety as a moderator. This approach indicates the accuracy of components that used for research. The result showed a significant relationship among of cultural intelligence, global leadership, and social anxiety.

**TABLE 6.** Cronbach's Alpha value of constructs and inter-correlation among of cultural intelligence, social anxiety, global leadership and as a moderator.

(n=212)

| Variable                 | Cultural Intelligence | Social Anxiety | Global Leadership |
|--------------------------|-----------------------|----------------|-------------------|
| 1. Cultural Intelligence | 1                     |                |                   |
| 2. Social Anxiety        | .162*                 | 1              |                   |
| 3. Global Leadership     | .390**                | .144*          | 1                 |

## Leadership

Correlation is significant at the 0.05 level (2-tailed). \*

Correlation is significant at the 0.01 level (2-tailed). \*\*

The results of the correlation coefficient in social anxiety, global leadership, and cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan, given the correlation coefficient of the three variables (cultural intelligence, social anxiety, global leadership), were statistically significantly positive at .01 and .05 respectively. In this analysis, independent variables must have a correlation of no more than .80 (Piyaphimonsit and Suksiri, 2017), which met the specified criteria.

The table 6 displays the Cronbach's Alpha value of constructs and inter-correlation among of cultural intelligence, social anxiety, global leadership and as a moderator. According to these results showed a moderator passed conditions of multicollinearity is the occurrences of high intercorrelations among cultural intelligence, social anxiety and global leadership for building the equation by stepwise multiple linear regression analysis methods and process. Multicollinearity is a statistical concept where independent variables in a model are correlates, among independent variables will result in the less of reliability statistical inferences and it is better to use independent variable as cultural intelligence, social anxiety and global leadership are not correlated or repetitive for next step of stepwise multiple linear regression analysis. (Hayes and Scott, 2021; Piyaphimonsit and Suksiri, 2017)

**TABLE 7.** Mean, Standard Deviation, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha value among of cultural intelligence, social anxiety, and global leadership and as a moderator.

| (n=212)                  |           |      |      |      |                  |
|--------------------------|-----------|------|------|------|------------------|
| Variable                 | $\bar{X}$ | S.D. | AVE  | CR   | Cronbach's alpha |
| 1. Cultural Intelligence | 4.07      | .67  | .797 | .966 | .956             |
| 2. Social Anxiety        | 2.20      | .34  | .670 | .910 | .897             |
| 3. Global Leadership     | 4.28      | .44  | .720 | .738 | .929             |

The table 7 displays the Mean, Standard Deviation (S.D.), Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha value of construct from data collection (n=212). According to this result showed all values passes the threshold condition ( $AVE > .5$  and  $CR > .5$ ). Cronbach's alpha higher than .80 are considered excellent (Kitpreedaborisut, 2011; Piyapimonsith and Suksiri, 2017). Next, the researcher used 3 independent variables, which are cultural intelligence, global leadership, and social anxiety, to analyze a stepwise multiple regression of the concomitant variables that predicts the cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan.

### Section 3 Joint-forecasting modeling result.

The hypothesis of this research is that cultural intelligence, social anxiety and global leadership can be used to predict the cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan.

**TABLE 8.** Stepwise multiple linear regression analysis predicting of cultural intelligence, global leadership, and social anxiety as a moderator.

(n=212)

| Variable                 | b                    | SE b                                | Beta                | t          | Sig  |
|--------------------------|----------------------|-------------------------------------|---------------------|------------|------|
| 1. Global Leadership     | .389                 | .095                                | .281                | 4.094      | .000 |
| 2. Cultural Intelligence | .321                 | .063                                | .206                | 3.007      | .000 |
| Social Anxiety           | -                    | -                                   | -                   | -          | -    |
| Constant                 | 1.665                | .095                                |                     |            |      |
| <hr/>                    |                      |                                     |                     |            |      |
| R=.408                   | R <sup>2</sup> =.167 | R <sup>2</sup> <sub>adj</sub> =.159 | F<br>overall=20.880 | Sig F=.000 |      |

### Verification of Research Hypothesis

Table 8 displays the result from stepwise multiple linear regression analysis predicting cross-cultural adjustment from cultural intelligence, social anxiety, and global leadership as a moderator related to cultural intelligence, and global leadership. The result shows the social anxiety could not jointly predict as a moderator was not significantly the cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan. This can explain global leadership, and cultural intelligence could jointly the cross-cultural adjustment as a moderator respectively ( $R^2 = .167$ ) up to 16.7 percent at the .001 level of significantly.

From the table, a multi-step regression analysis of the predictive variables of cultural intelligence, social anxiety and global leadership were capable of jointly predicting cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan. It was found that global leadership and cultural intelligence were able to predict cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan with a statistical significance of .001. Therefore, it can predict cross-cultural adjustment percent at 16.7 ( $R^2=.167$ ) and multiple correlation coefficients equal to .408 (R), which can be written as a multiple regression equation in the form of raw scores. It is as follows:

$$\text{Cross Cultural Adjustment} = 1.665 + .389 (\text{Global Leadership}) + .321 (\text{Cultural Intelligence})$$

The multiple regression equation in form of standardized scores. It is as follows:

$$Z_{\text{Cross-cultural Adjustment}} = .281 (Z_{\text{Global Leadership}}) + .206 (Z_{\text{Cultural Intelligence}})$$

According to the cross-cultural adjustment forecast equation, the format of the above score shows that global leadership and cultural intelligence can predict the cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan. In other

words, when employees have higher global leadership and higher cultural intelligence, this will result in an increase in the cross-cultural adjustment of employees. On the other hand, if an employee in a private hotel business at the Bangkok metropolitan has a low global leadership and cultural intelligence, this will result in a reduction in the cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan

According to the cross-cultural adjustment forecast of employee in a private hotel business at the Bangkok metropolitan, the most predictive variables compared to the constants, were global leadership, followed by cultural intelligence, respectively.

## **DISCUSSION AND CONCLUSION**

### **DISCUSSION OF RESEARCH**

The research results found that global leadership and cultural intelligence abilities were able to predict the cross-cultural adjustment of employee in a private hotel business at the Bangkok metropolitan at a statistical significance level of .001, and cross-cultural adjustment was predicted at 16.7% ( $R^2=.167$ ), and it has a multiple correlation coefficient of .408 (R).

### **DISCUSSION OF FINDINGS AND RESEARCH CONTRIBUTIONS**

#### **Global leadership**

Global leadership abilities can be used to predict the cross-cultural adjustment of a hotel business employee in Bangkok. It was statistically significant at the .001 level, and was able to predict cross-cultural adjustment at 16.7% ( $R^2=.167$ ) in regards to global leadership. As such, employees should be supported and promote their values through service ethics training courses. An important part of professional service work is to have leadership skills. Good service providers are ready to learn about changes in the world, especially during the age of globalization (Global Knowledge), and adapt to the characteristics of leadership (Threshold Traits). It is important to possess a service-ready attitude in order to provide services to people from different cultures (Attitudes and Orientation Global Mindset). The employees should also have interpersonal skills, intrinsic morals, and ethics from within themselves (System Skills). Ideally, through cross-cultural adjustment and global leadership skills, employees can exceed customer expectations (Sullivan, 2011). Therefore, employees' global leadership skills should be developed to a higher level. Moreover, global leadership skills are vitally important to hotel business and services. By developing global leadership skills, organizations can provide services to customers, from all over the globe, while creating long term value. This is consistent with the research of Anabella, Carlos and Marta (2013). Specifically, this research stated that global leadership is based on efficiency and the ability to manage internal, environmental, economic and social issues. This allows for the achievement of balance and coexistence between individuals, environment, and business teams. Furthermore, it was also found that planning and management, education and mentoring, and diversity of cultures can enhance the skills of global leadership within an organization.

## **Cultural intelligence**

Cultural intelligence is essential to the practical application of the service work in the hotel business. According to the research work of Dyne et al. (2008), cultural intelligence impacts cross-cultural adjustment. In other words, when individuals have a knowledge and understanding of how to work with people from different cultures or society properly, those individuals will be motivated to learn more about said cultures. Additionally, if organizations provide training regarding how to provide services to customers from different cultures, employees are more likely to apply this knowledge in their work. The employees will possess the problem-solving thought-processes and take action on the metacognition basis (Dyne and Rockstuhl, 2016). Employees will express themselves through providing excellent services to customers. Moreover, it will create value for the customers, which is beneficial to employees and ensures a positive image for the hotel.

## **Social anxiety**

In terms of social anxiety, causes of social anxiety variables did not contribute to the predictive coefficient ( $R^2$ ), and thus cannot remain in the cross-cultural adjustment predictive equation. This was due to environmental causes. The population data was collected during the COVID-19 situation. The pandemic had decreased employees' ability to meet people from different cultures or from other societies. This result is consistent with the research work of Hofmann and Hinton (2010). It stated that effects of social anxiety have factors in other cultural aspects, which can change the effect of cultural adjustment, namely Individualism and Collectivism, Perception of Social Norms, Self-construal and Gender Roles Identification.

## **RECOMMENDATIONS**

1. Global Leadership provides opportunities for employees at each level to use innovative technology to improve their work. It can be used as a criterion for adjusting personnel to different positions. These adjustments can ensure innovation, adaptation, adjustment, and technology are being properly applied for the benefit of the organization with maximum efficiency.
2. Cultural Intelligence should promote activities and relationships between Thai and foreign employees both inside and outside of organization. Exchanging ideas and mutual communication should be encouraged. Doing so will ensure employees are comfortable with people of different cultures and familiar with coordinating with both Thai and foreign employees.
3. Curriculums should be created that promote language proficiency in order to decrease employees' social anxiety. This can help employees gain knowledge, while reducing stress from work both internally and externally. It is also a motivator for employees to constantly improve themselves. Furthermore, examinations should be in place to measure the level of language proficiency of employees within the organization. Employees should receive funds as a reward for high proficiency.
4. Other cross-cultural adjustment factors should be studied in order to see how cultural adjustment in each area can be developed to effectively improve the cultural adjustment of hotel staff. This could include cross-cultural studies on issues such as Cross-Cultural Reentry and Cross-Cultural Servanthood, Cross-Cultural Communication, Cross-Cultural Psychology, Cross-Cultural Pragmatics, Cross-Cultural Management, Cross-Cultural Competencies etc. In terms of leadership studies on issues such as Borderless Leadership,

Disruptive Leadership, Educational Leadership, Global and Regional Leadership, Cultural of Educational Leadership, and Inclusive Leadership etc. And in terms of anxiety studies on issues such as Mindfulness and Acceptance, Confidence Building, Generalized Anxiety Disorder, Self-Esteem and Charisma, The Shyness, Social Confidence, Social Anxiety Cure, and Self-Esteem and Insecurities etc.

5. Increased research on a larger population of hotel employee's population in Bangkok should be undertaken so the results can be used as a guideline to encourage hotel business employees, and improving customer service, both Thais and foreigners, as well as from other regions of society.

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# **MEDIA CONTENT AND ONLINE AUDIENCE ENGAGEMENT PRACTICES ON YOUTUBE: CONTENT ANALYSIS OF 80 VIDEOS BY TOP YOUTUBE FOREIGN INFLUENCERS IN CHINA<sup>2</sup>**

by

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## **ABSTRACT**

This article examines media content and online audience engagement practices by top foreign YouTube influencers in China. Driven by the theories of self-presentation and user-generated content, a content analysis of 80 videos by China's 8 top foreign influencers was conducted. Descriptive statistics were used to analyze the data. The findings suggest that vlogs were the dominant types of video content. They played the major role in portraying influencers' everyday life in China or perceptions towards cultural differences between their own culture and Chinese culture. As for the core promoting and encouraging viewer engagement practices, the influencers used sustaining practices to encourage the viewers to subscribe, like, or share their content. As for the core interaction with audience practices, the influencers used acknowledge audience practices to thank their audiences for watching their videos at the end of the videos. As for the core speaking styles, the influencers communicated with their audiences by using conversational styles in a normal speaking voice. The dominant language used by American, British, and German influencers was Mandarin. South Korean influencers mainly used Korean language. Managerial implications are provided for foreign influencers, marketers, or brand managers who aim to use influencer marketing to understand Chinese YouTube audiences and increase their attention.

**KEY WORDS:** Media Content, Audience Engagement, YouTube, User-generated Content, Influencers

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<sup>2</sup> Top Paper Award 2021

## INTRODUCTION

The influencer market in China has exponentially grown. Since 2016, the number of influencers who attracted more than 100,000 followers in China has been increased by 57.3 percent (Dudarenok, 2018). In 2018, there was an increase by 51 percent of the influencers with more than 100,000 followers and 23 percent of those with more than 1,000,000 followers (Dudarenok, 2018). The social media ad revenue has grown from approximately US\$ 7 billion before 2019 to US\$ 9 billion in 2019. The growing revenue has been predicted to reach approximately US\$ 20 billion by 2022 (Cervi, 2020). Among 1.3 billion population in China, there are more than 800 million internet users (Cervi, 2020). A survey by Rakuten Insight shows that 81 percent of Chinese consumers purchased products endorsed by the influencer(s) that they had followed (Thomala, 2020). This insight implies that influencers in China effectively exerts their influential power over consumers' purchase decision.

While Chinese influencers have become prominent, foreign (known as 'laowai' in Mandarin) influencers have gradually created their online presence and built careers on popular social media platforms for Chinese people, such as, Weibo, Bilibili, and Kuaishou since before 2018 (Dudarenok, 2018). Non-native Chinese foreign influencers are required to be good at creating content that could relate themselves with Chinese audiences, in terms of culture and/or life in China (Dudarenok, 2018). They are categorized into two major groups: The first group of foreign influencers are "either international celebrities or foreigners living in Asia" (para. 4). They are known for their distinctive personas or knowledge of Chinese culture and language. The second group has gained international recognition on social media in different countries. Their knowledge of China and ability to connect with Chinese audiences are their key success although some of them can only use simple Chinese phrases that are generally understood by younger generations of Chinese audiences (Dudarenok, 2018).

Foreign influencers in China use multiple platforms to reach international audiences (Dudarenok, 2018). While each influencer may choose different social media platforms, they at least create an account on YouTube which predates some popular Chinese video-sharing social media developed and owned by Chinese companies. YouTube allows the influencers' content to reach international audiences and subscribers, evidenced by more than 2 billion users from more than 100 countries (YouTube About, 2021). YouTube is considered the world's top video-sharing platform, the second-most popular social media platform second to YouTube (Tankovska, 2021), and the second-most popular search engine after Google (Global Reach, 2020). Over one billion hours of videos were spent by YouTube viewers on its platform every day, generating billions and billions of views (YouTube Official Blog, 2021). The turn of video culture lends itself to the rise of YouTube influencer marketing. Brands set clear campaign objectives and choose campaign type, influencers, and KPIs on which to focus. Influencer-made branding videos are hosted by people that the viewers trust (Influencer Marketing Hub, 2021).

The focus on this study is to examine media content and online audience engagement practices by 8 top foreign YouTube influencers in China. The authors chose to analyze YouTube videos by foreign influencers in China. Proposed by Pereira et al. (2018), popular YouTube videos are defined by three major characteristics, which are, content, performance, and aesthetics. This research studies only the dimensions of content and perfor-

mance. Mainly, it contributes to literature of user-generated content and self-presentation: the literature was drawn to study a non-Western phenomenon that is understudied. Numerous research (Limkangvanmongkol, 2021; Shtern & Chan, 2019; Sofian, 2020) explored internet celebrities on the YouTube platform in Non-Western settings. However, there is a lack of research that investigates YouTube communities in China due to the censorship of YouTube in China (Bloomberg News, 2020). Informed by one of the authors who is native Chinese, coupled with information provided by credible online articles (Bloomberg News, 2020), Chinese people resort to virtual private networks (VPNs) to access online content on social media sites, including YouTube. One of their media outlets are YouTube channels by foreigners, evidenced by popular foreign YouTube influencers in China that were listed by Ninchanese (2018) and CGTN (2018). They have attracted between 200,000 and 2,000,000 followers. This research is guided by two research questions:

RQ1: What types of content are created by top foreign YouTube influencers in China?

RQ2: How do top foreign YouTube influencers in China engage with their audience?

## **LITERATURE REVIEW**

### **User-Generated Content (UGC)**

User-generated content (UGC) is published content created by the general public rather than professional institutions (Burgess & Green, 2009). In its 2007 report, the Organization for Economic Cooperation and Development (OECD) described three characteristics of UGC: “i) Content made publicly available over the Internet, ii) which reflects a certain amount of creative effort, and iii) which is created outside of professional routines and practices” (“Working Party,” 2007, p. 4). Publicly available platforms for UGC include social network sites (Boyd & Ellison, 2008) blogs, wikis, podcast sites, as well as a virtual world (Burgess & Green, 2009). Therefore, UGC could take various forms, such as, texts, images, and videos. The dissemination of UGC seeks no support by professional institutions in terms of content creation, production, and post-production (Burgess & Green, 2009). UGC fully reflects the zeitgeist of Web 2.0, that is, an individual user has the potential to contribute valuable information, and express oneself online. UGC disseminated through social media is presented as a mixture of fact and opinion, impression and sentiment, experiences, and even rumors (Blackshaw, 2006).

User-generated content platforms, such as, YouTube, have become popular in a short time as the ‘Broadcast Yourself’ concept allows users to interactively create content and value (Christodoulides, 2009). The existence of the platform and user-generated content has introduced audiences’ empowerment, despite its ambiguous nature (Van Dijck, 2013). Not only YouTube content but also the value of the platform is co-created by multiple actors (Burgess & Green, 2009). There are diverse types of content published on YouTube. Brown (2018) analyzed the most popular YouTube videos in terms of the number of views as shown in Table 1. There are 8 types as followed: product review, vlogs, gaming videos, comedy videos, challenge videos, educational videos, unboxing, and beauty.

**TABLE 1.** Popular Types of Videos on YouTube.

| No. | Types              | Description                                                                                                                                                                                                                                                                        |
|-----|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Product Reviews    | YouTube influencers evaluate a certain type of products, the quality and price of products, etc. The videos could influence consumers' purchasing decisions. Some products may be introduced by famous influencers, which can quickly improve brand image and sales (Brown, 2018). |
| 2.  | Vlogs              | Vlogs are the most popular types of video content. The influencers record what they do every day and post their videos on the YouTube platform. Vlogs may update some activities that YouTubers attend or do at home (Brown, 2018).                                                |
| 3.  | Gaming videos      | Gaming is one of the most popular video formats on YouTube. Gaming videos vary greatly, and that is part of their appeal and fun: It might be recording of a user playing a game, reviewing a new game, or helping someone through a tricky part of a game (Brown, 2018).          |
| 4.  | Comedy videos      | Comedy videos are not only created by comedians but are created to record people's lives or some animals in the way that entertains audiences (Brown, 2018).                                                                                                                       |
| 5.  | Challenge videos   | Challenge videos are greatly popular on YouTube. Challenge videos are usually difficult to complete. They usually attract a lot of audiences' attentions (Brown, 2018).                                                                                                            |
| 6.  | Educational videos | Educational videos are types of videos that focus on educating audiences about a certain topic or subject (Brown, 2018).                                                                                                                                                           |
| 7.  | Unboxing videos    | Unboxing videos focus on YouTubers opening sealed boxes filled with gear and products that audiences are interested in, and then, describing the products to their audiences (Brown, 2018).                                                                                        |
| 8.  | Beauty videos      | Beauty videos are usually made by beauty influencers as means to update trends about beauty or demonstrate how to do make up in different styles. Most of the audiences of such videos are women (Brown, 2018).                                                                    |

Source: Brown, 2008

In China, the percentage of online user-generated content has exceeded professionally produced online content since before 2010 (Xiaoji, 2010). The literature on user-generated content, in particular, Brown (2018) informed the first research questions which aimed to find out types of content that were created by top foreign YouTube influencers in China.

### **Self-Presentation in Online Settings**

Goffman (1959) claimed that “we are all just actors trying to control and manage our public image. We act based on how others might see us” (p. 22). Actors use various symbols, such as, costume, makeup, language, and manner, to present desired personas in particular contexts and settings. The rise of social media allows for far greater strategic self-presentation than face-to-face communication (Ellison et al., 2006). Users can choose to present themselves in a specific way and show their lifestyle to their audience or certain

groups of people in multiple forms, such as, images and videos. It involves expressing oneself and behaving in ways that create the desired impression (Baumeister, 1982).

Numerous works that exploring non-Western internet celebrities extended Goffman (1959)'s self-presentation theory to analyze the ways in which people managed their personal impressions on social networking sites. Abidin (2015) claimed that influencers presented themselves as relatable by sharing some similarities with ordinary people. Limkangvanmongkol (2018) found that Thai beauty bloggers used honorific particles to show politeness and respect to followers. Limkangvanmongkol and Abidin (2018) proposed that Thai net idols were required to negotiate

**TABLE 2.** Audience Engagement Practices.

| No. | Category                                  | Subcategory           | Description                                                                                                          |
|-----|-------------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------|
| 1.  | Promoting & Encouraging Viewer Engagement | Sustaining            | Suggests ways to interact more with this video or channel (e.g., "like this & subscribe!") (McRoberts et al., 2016). |
|     |                                           | Promoting Brand       | Promoting own brand on other sites/channels (McRoberts et al., 2016).                                                |
|     |                                           | Promoting Others      | Suggesting other people/companies to patronize (McRoberts et al., 2016).                                             |
|     |                                           | Giveaways             | Offering digital or physical gifts to viewers (McRoberts et al., 2016).                                              |
|     |                                           | Sponsor Ask           | Asking viewers directly for money (McRoberts et al., 2016).                                                          |
| 2.  | Interaction with Audience                 | Acknowledging Viewers | Thank viewers for watching or otherwise acknowledges the presence of viewers (McRoberts et al., 2016).               |
|     |                                           | Building Community    | Suggest ways to interact with the channel (comment); refers to fans by a group name (McRoberts et al., 2016).        |
|     |                                           | Direct Engagement     | Give attention to specific viewers in videos (McRoberts et al., 2016).                                               |
|     |                                           | None                  | No specific engagement with viewers (McRoberts et al., 2016).                                                        |
| 3.  | Speaking Styles                           | Conversational        | Unscripted talking in a "normal" speaking voice (McRoberts et al., 2016).                                            |
|     |                                           | Professional          | Scripted or very polished talking (McRoberts et al., 2016).                                                          |
|     |                                           | Shouty                | Talking especially loudly or emphatically (McRoberts et al., 2016).                                                  |
|     |                                           | Eccentric             | Using strange voices, making strange sounds (McRoberts et al., 2016).                                                |
|     |                                           | N/A                   | No speaking in video (McRoberts et al., 2016).                                                                       |

Source: McRoberts et al., 2016

between Thai customs (e.g., dressing in black or somber colors and wearing muted-tone make-up styles during a yearlong period of mourning for the passing of Thailand's King Bhumibol Adulyadej) and global trends (e.g., creating how-to videos for new beauty and fashion trends by Western countries). Limkangvanmongkol (2021) found that Thai YouTube creators crafted their personas by presenting themselves in the roles of how-to guru, the information source for the purchase decision, and entertainer.

The video characteristics of YouTubers are defined by three main dimensions: content, performance, and aesthetics (Pereira et al., 2018). By focusing on the dimension of performance, this research relied on the following practices by McRoberts et al. (2016) as shown in Table 2: promoting and encouraging viewer engagement, interaction with audience, and speaking styles. The authors used the literature to inform the second research question which aimed to find out online audience engagement practices that were used by top foreign YouTube influencers in China.

## METHODOLOGY

This research applied a quantitative research approach by using content analysis to examine how top foreign YouTube influencers in China created their content and engaged with their audiences. Content analysis is a research methodology to make sense of the content of messages-be they texts, symbols, images, or audio data to determine textual meaning (Krippendorff, 2013). As Krippendorff (1989) argues, "content analysis seeks to analyze data from specific context in view of the meanings someone, groups or a culture-attributes to them" (p. 403). Therefore, the method fits the purpose of this research which aimed to reveal types of content and online audience engagement practices by China's 8 top foreign YouTube influencers. Four aspects of the video content were coded: *types of video content created*, *video promoting and encouraging viewer engagement*, *interaction with audience*, and *speaking styles*.

### Sample

This quantitative research applied purposive sampling as a sampling method of this study. The purposive sample that is known as a judgmental sample is a non-probability sampling technique in which the sample members are chosen only on the basis of the authors' knowledge and judgment (Lavrakas, 2008). As the authors' knowledge is instrumental in creating a sample in this sampling technique, there are chances that the results obtained will be highly accurate with a minimum margin of error (Lavrakas, 2008).

Initially, the authors chose the top foreign influencers in China based on their popularity and number of followers provided by Ninchanese (2018) and CGTN (2018). 8 influencers with more than 80,000 YouTube subscriptions and more than 100 video content uploads were selected based on the rankings. In the next stage, the authors chose the influencers' videos based on Social Blade which is a US website that tracks social media statistics and analytics (Social Blade, 2020). 10 most viewed videos by each influencer were selected, yielding a total of 80 videos.

Table 3 lists 8 top foreign YouTube influencers that were selected in this study: 1. Fulinfang 拂蒜坊 (British), 2. Thomas 阿福 (Germany), 3. 口语老炮儿马思瑞 Laoma Chris (America), 4. The China Traveller (British), 5. Jerry Kowal 我是郭杰瑞 (America), 6. 歪果仁研究协会 Ychina

(America), 7. 信誓蛋蛋- Quentin (France), and 8. 肌肉山山 jiroushanshan (South Korean). Their videos were published between 2017 and 2020 and attracted between 233,300 and 6.7 million viewers. Table 4 describes the core content by foreign YouTube influencers in China.

**TABLE 3.** Top 8 Foreign YouTube Influencers in China.

| NO. | YouTube Page's Name               | Number of Subscribers | Number of Video Views | Highest Numbers of Video Views |
|-----|-----------------------------------|-----------------------|-----------------------|--------------------------------|
| 1.  | Fulinfang 拂蒜坊 (British)           | 336K                  | 37,136,818            | 1.2M                           |
| 2.  | Thomas 阿福 (Germany)               | 535K                  | 91,956,912            | 2.0M                           |
| 3.  | 口语老炮儿马思瑞 Laoma Chris (America)    | 744K                  | 63,426,833            | 6.0M                           |
| 4.  | The China Traveller (British)     | 101K                  | 10,023,105            | 583.8K                         |
| 5.  | Jerry Kowal 我是郭杰瑞 (America)       | 663K                  | 103,325,799           | 2.8M                           |
| 6.  | 歪果仁研究协会 Ychina (America)          | 241K                  | 28,242,934            | 1.2M                           |
| 7.  | 信誓蛋蛋 - Quentin (France)           | 2M                    | 216,781,126           | 6.7M                           |
| 8.  | 肌肉山山 jiroushanshan (South Korean) | 816K                  | 174,521,582           | 5.1M                           |

**TABLE 4.** Core Content by Top 8 Foreign YouTube Influencers in China.

| NO. | YouTube Page's Name               | Core Content                                                                                                                                                                                          |
|-----|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Fulinfang 拂蒜坊 (British)           | Cultural differences between Chinese and British people; Daily life in China through lenses of a foreigner by using humor; Teaching English to Chinese audiences.                                     |
| 2.  | Thomas 阿福 (Germany)               | Cultural differences between Chinese and German people; Daily life of his Chinese wife; Challenge videos.                                                                                             |
| 3.  | 口语老炮儿马思瑞 Laoma Chris (America)    | Testing English proficiency of Chinese people; Teaching how to speak English correctly based on the analysis of the conversations or interviews of Chinese entrepreneurs or famous actors.            |
| 4.  | The China Traveller (British)     | Geography of China; Chinese culture through the lenses of British people.                                                                                                                             |
| 5.  | Jerry Kowal 我是郭杰瑞 (America)       | Cultural differences between Chinese and American people.                                                                                                                                             |
| 6.  | 歪果仁研究协会 Ychina (America)          | Interviews with foreigners in China regarding various issues, such as, mobile payment, online shopping and logistics; Asking foreigners who are learning Chinese to share their learning experiences. |
| 7.  | 信誓蛋蛋- Quentin (France)            | Challenge videos, such as, survival games; Humorous videos, such as, crossing the shark area, such as, survival on a deserted island for two weeks.                                                   |
| 8.  | 肌肉山山 jiroushanshan (South Korean) | Daily lives of himself and his sister in China; Challenge videos, such as, setting 100 alarm clocks in his sister's room.                                                                             |

## Coding Strategy

Coding techniques as shown in Table 5 were based on theories discussed in selections of the literature review. Specifically, RQ1 investigated the content that were created by influencers. Authors developed the coding scheme based on Brown (2018)'s literature on popular types of videos on YouTube which included product review, vlogs, gaming videos, comedy videos, challenge videos, educational videos, unboxing, and beauty. RQ2 examined the extent to which YouTube influencers performed themselves to their audiences. Research relied on the coding scheme adapted by McRoberts et al. (2016) which included promoting and encouraging viewer engagement, interaction with audience, and speaking styles. Two coders who were graduate students in the MA Global Communication program at Bangkok University worked together since the stage of designing a codebook and code sheets. The codebook and code sheets were developed to provide general guidelines for content analysis. The pilot study tested a sample of 24 videos with the second coder. They recorded the frequency of each element in the video in Microsoft Excel. Descriptive statistics (frequency and percentage) were used to analyze the data. Following Perrault and Leigh (1989)'s formula, the average of intercoder reliability was .88 which is within the range of acceptable intercoder reliability.

**TABLE 5.** Coding Scheme.

| Item No. | Coding Item                      | Instructions                                                     | Keywords                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------|----------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Influencers' Countries of Origin | Mark 1 for the country that the influencer originated from.      | China<br>England<br>Germany<br>Korea<br>France                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2        | Types of Videos                  | Mark 1 for the type of videos.<br>*multiple selections permitted | Product Reviews: evaluations of a certain type of products, the quality and price of products (Brown, 2018)<br>Vlogs: recording of what influencers do everyday; activities that they do (Brown, 2018)<br>Gaming videos: recording of a user playing a game; reviewing a new game; helping someone through a tricky part of a game (Brown, 2018)<br>Comedy videos: entertaining videos by comedians; entertaining videos by other people or animals (Brown, 2018)<br>Challenge videos: tasks that are difficult to complete (Brown, 2018)<br>Educational videos: educational videos of certain topic or subject (Brown, 2018) |



**TABLE 5.** (Continued 1)

| <b>Item No.</b> | <b>Coding Item</b>                        | <b>Instructions</b>                                                                                                                                      | <b>Keywords</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2               | Types of Videos                           | (Continued)                                                                                                                                              | <p>Unboxing videos: opening sealed boxes filled with gear and products that audiences are interested in, and then, describing the products to their audiences (Brown, 2018)</p> <p>Beauty videos: update trends about beauty; demonstration how to do make up in different styles (Brown, 2018)</p>                                                                                                                                                                                                                       |
| 3               | Promoting & Encouraging Viewer Engagement | <p>Mark 1 for the promoting &amp; encouraging viewer engagement practices used in the video by the influencer.</p> <p>*multiple selections permitted</p> | <p>Sustaining: suggesting ways to interact more with this video or channel (e.g., “like this &amp; subscribe!”) (McRoberts et al., 2016).</p> <p>Promoting Brand : promoting own brand on other sites/channels (McRoberts et al., 2016).</p> <p>Promoting others: suggesting other people/companies to patronize (McRoberts et al., 2016).</p> <p>Giveaways : offering digital or physical gifts to viewers (McRoberts et al., 2016).</p> <p>Sponsor Ask: asking viewers directly for money (McRoberts et al., 2016).</p> |
| 4               | Interaction with Audience                 | <p>Mark 1 for the interaction with audience practices used in the video by the influencer</p> <p>*multiple selections permitted</p>                      | <p>Acknowledging Viewers: thank viewers for watching or otherwise acknowledges the presence of viewers (McRoberts et al., 2016).</p> <p>Building Community: suggest ways to interact with the channel (comment); refers to fans by a group name (McRoberts et al., 2016).</p> <p>Direct Engagement: give attention to specific viewers in videos (McRoberts et al., 2016).</p> <p>None: no specific engagement with viewers (McRoberts et al., 2016).</p>                                                                 |

**TABLE 5.** (Continued 2)

| <b>Item No.</b> | <b>Coding Item</b> | <b>Instructions</b>                                                                                      | <b>Keywords</b>                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------|--------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5               | Speaking Styles    | Mark 1 for the speaking style used in the video by the influencer.<br><br>*multiple selections permitted | Conversational: unscripted talking in a “normal” speaking voice (McRoberts et al., 2016).<br><br>Professional: scripted or very polished talking (McRoberts et al., 2016).<br><br>Shouty: talking especially loudly or emphatically (McRoberts et al., 2016).<br><br>Eccentric: using strange voices, making strange sounds (McRoberts et al., 2016).<br><br>N/A: no speaking in video (McRoberts et al., 2016). |
| 6               | Languages          | Mark 1 for the language used in the video by the influencer.<br><br>*multiple selections permitted       | Mandarin (Chinese)<br><br>English<br><br>German<br><br>Korean<br><br>French                                                                                                                                                                                                                                                                                                                                      |

## FINDING

This research examined media content and online audience engagement practices by foreign influencers in China through analyzing content of 80 YouTube videos.

### RQ1: What types of content are created by top foreign YouTube influencers in China?

The first research question focused on obtaining description of the types of content that were created by the eight top foreign YouTube influencers in China. Table 6 shows that vlogs (65.26%) were the dominant types of content created by the influencers. The influencers used vlogs to portray their everyday life in China or share their perceptions towards cultural differences between their own culture and Chinese culture. For example, For The China Traveller YouTuber, he constantly explored China’s geography and culture by using unique British humor to tell the story of China. For 我是郭杰瑞 YouTuber, his most watched vlog recorded cultural differences between China and the United States. He discussed why American people bought Chinese products or why American people like to save money. For Thomas 阿福, he mainly used vlogs to record the lives of his Chinese wife and himself and portrayed cultural differences between China and Germany.

**TABLE 6.** Frequency of Types of Video Content Created by Top Foreign YouTube Influencers in China

(n = 80)

| Types of Content Created | Frequency | Percentage(%) |
|--------------------------|-----------|---------------|
| Vlog                     | 62        | 65.26%        |
| Challenge Videos         | 19        | 20.00%        |
| Educational videos       | 8         | 8.42%         |
| Comedy Videos            | 5         | 5.26%         |
| Product Review           | 1         | 1.06%         |

\*multiple selections permitted

RQ2: How do top foreign YouTube influencers in China engage with their audiences?

The second research question focused on exploring online audience engagement through online presentation practices. As for the core promoting and encouraging viewer engagement practices, the influencers used sustaining practices (45%) to encourage the audiences to subscribe, like, or share their content as shown in Table 7. In doing so, the influencers showed their good intention that subscription helped the audiences never miss further video updates.

**TABLE 7.** Frequency of Promoting and Encouraging Viewer Engagement

(n = 80)

| Promoting & Encouraging Viewer Engagement | Frequency | Percentage(%) |
|-------------------------------------------|-----------|---------------|
| Sustaining                                | 72        | 45.00%        |
| Promoting Others                          | 39        | 24.38%        |
| Promoting Brand                           | 32        | 20.00%        |
| Sponsor Ask                               | 15        | 9.37%         |
| Giveaways                                 | 2         | 1.25%         |

\*multiple selections permitted

As shown in Table 8, the influencers used acknowledge audience practices (57.58%) to thank their audience for watching their videos at the end of the videos.

**TABLE 8.** Frequency of Interaction with Audience

(n = 80)

| Interaction with Audience | Frequency | Percentage(%) |
|---------------------------|-----------|---------------|
| Acknowledging Viewers     | 57        | 57.58%        |
| Direct Engagement         | 38        | 38.38%        |
| Building Community        | 3         | 3.03%         |
| None                      | 1         | 1.01%         |

\*multiple selections permitted

As for the core speaking styles, the influencers communicated with their audience by using conversational styles (46.78%) or unscripted talking in a normal speaking voice as shown in Table 9. As most of the videos were created in the form of vlogging, YouTube influencers narrated their story in conversational style at the normal speaking rate. How-

ever, in some special scenes, they also used some special and strange voices to attract the audiences' attention.

**TABLE 9.** Frequency of Speaking Styles

(n = 80)

| Speaking Styles | Frequency | Percentage(%) |
|-----------------|-----------|---------------|
| Conversational  | 80        | 46.78%        |
| Eccentric       | 54        | 31.58%        |
| Shouty          | 27        | 15.79%        |
| Professional    | 10        | 5.85%         |
| N/A             | 0         | 0%            |

\*multiple selections permitted

As shown in Table 10, the main language used by the influencers was Mandarin (50.71%), followed by English (35.00%), as well as their mother tongue. For example, 肌肉山山 jiroushanshan who used Korean in every video.

**TABLE 10.** Frequency of Languages

(n = 80)

| Language           | Frequency | Percentage(%) |
|--------------------|-----------|---------------|
| Mandarin (Chinese) | 71        | 50.71%        |
| English            | 49        | 35.00%        |
| Korean             | 11        | 7.86%         |
| German             | 7         | 5.00%         |
| French             | 2         | 1.43%         |

\*multiple selections permitted

## DISCUSSION AND CONCLUSION

This study is of an exploratory nature. Findings from a content analysis of 80 YouTube videos by top foreign influencers in China reveal 2 interesting insights:

First, laowai or foreign YouTube influencers in China used vlogs as dominant types of content to capture the attention of their audiences. The popularity of vlogs for Chinese people has been increased, evidenced by the number of vlogs that reached 249 million in 2019 (iiMedia Research, 2020). As a type of user-generated content on YouTube, foreign influencers' vlogs combined storytelling and audio-visual content (Safko, 2010) which relied on a mixture of fact and opinion, impression and sentiment, and experiences (Blackshaw, 2006). Results showed that the influencers catered diverse content but they manifestly expressed interest in China. They recorded their or family members' daily life in China and their perspective on cultural differences between their country of origin and China. Aligned with Liang (2020), vlogs facilitated cross-cultural communication and promoted understanding through everyday life presentation. As "the personal narrative, told in the storyteller's unique voice" (Burgess, 2006, p. 207), the influencers created "small stories" (Kleut et al., 2018, p.7) that reflect critical and creative interpretations towards the new culture that they were interested in or tried to fit in. Various small stories ranged from daily life activities of the influencers living in China, the analysis of the conversations or interviews of Chinese entrepreneurs or famous actors, and teaching how to speak English correctly, for instance.

In comparing the audience engagement practices among the influencers who came from Asia (South Korea), Europe (UK and Germany), and North America (USA), they similarly used sustaining, acknowledging viewers, and conversational speaking styles. Mandarin is the dominant language used by British, German, and American influencers, followed by English. However, South Korean influencers mainly used Korean language to communicate with their audiences, followed by Mandarin.

Second, foreign YouTube influencers in China used audience engagement practices to present themselves online. The influencers used sustaining practices to encourage the viewers to subscribe, like, or share their content. They communicated with their audience by using conversational styles in a normal speaking voice. Aligned with McRobert et al. (2016), professional and youth YouTube channels' practices require YouTubers to sustain audiences by suggesting audiences to interact more with the videos and use unscripted speaking styles. However, the result from this research is different from the results by McRobert et al. (2016) for the interaction with audience practices. This research found that the core interaction with audience practices pointed to audience acknowledgement. The influencers thanked their audiences for watching their videos at the end of the videos. Underlying their audience engagement practices, they portrayed themselves accessible by and relatable to (Abidin, 2015) their audiences. The desired impression managed by the influencers (Goffman, 1959) reflected the aspect of cultural identity expression and construction, in particular, the performative nature of ethnic identities (Cover, 2012). As a foreigner in the Chinese setting, the core strategy to craft their personas was showing their interest in China: lifestyle, attitudes, business-doing, and geography, for instance.

## **RECOMMENDATIONS**

Managerial implications are provided for foreign influencers, marketers, or brand managers who aim to use influencer marketing to understand Chinese YouTube audiences and increase their attention. First, vlogs should be the major types of video media content, as they could cater to different content that attracts diverse audiences. Second, showing the real interest in China and sharing perspectives on cultural differences in vlogs serve as the major points that vlogs could receive massive attention. Third, asking audiences to subscribe, like, or share the influencers' content, thank the audiences for watching their videos, and using conversational styles are the practices that should be applied. Fourth, the ability to speak Mandarin could be beneficial to increase the influencers' popularity. Further research should analyze cultural differences in vlogs and consider examining opinions of audiences towards foreign influencers in China.

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# **SELLING BEAUTY ON WEIBO: CONTENT ANALYSIS OF SHORT VIDEOS' ADVERTISING STRATEGIES, ADVERTISING APPEALS, AND ADVERTISING EXECUTIONS<sup>3</sup>**

by

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## **ABSTRACT**

This article examines the dominant advertising strategies, advertising appeals, and advertising executions in short videos from Weibo official accounts by high-prestige cosmetic brands. A content analysis of 84 short videos from 7 Weibo official accounts was conducted. The results suggest that the product advertising strategies were the primary strategies used in the sampled videos. Rational appeals were more observed than emotional appeals. Feature appeals were the core rational appeals. Personal states or feeling appeals dominated the emotional appeals categories. Testimonial executions were the most frequently used executions. In comparing short videos created by brands and by KOLs, product advertising strategies were the most frequently used strategies among the sampled videos. Rational appeals were the most commonly used appeals in the videos created by brands and by KOLs. Fantasy and testimonial executions were the most used executions in short videos created by brands and by KOLs, respectively. The research results lend themselves to provide managerial implications for strategizing Weibo advertising by international high-prestige cosmetic brands.

**KEY WORDS:** Advertising appeals, Advertising executions, Advertising strategies, China, Weibo

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<sup>3</sup> Top Paper Award 2021

## INTRODUCTION

In June 2020, China prestige beauty e-commerce sales increased 87% to \$1.3 billion (Riley, 2020). Due to the mid-year sales festival known as China's '618' Shopping Festival, "all beauty super-categories recorded growth compared to last year, with skincare sales increasing by 98% to \$489 million, makeup sales increasing 58% to \$102 million, fragrances sales increasing 61% to \$21 million, and haircare sales increasing 126% to \$16 million" (Riley, 2020).

As China's middle class expands and consumers have higher purchasing power, they are likely to spend their beauty expenses on luxury or expensive products. The high-ends products signify not only high quality but also serve to show their successful careers purchasing power (Lim, 2020). Popular luxury brands among Chinese consumers are mostly foreign brands, such as, Dior, Chanel, La Mer, Estée Lauder, and Lancôme. Chinese consumers associate French and European brands with innovation, Japanese brands with good image, and Korea, Asian and US brands with mass markets (Lim, 2020). Consumers aged 35 – 45 are the highest spender on the luxury beauty products. Moreover, popular livestreaming trends create more brand awareness and sales among Generation Z consumers, as the online platforms allows for direct engagement with beauty experts and key opinion leaders (KOLs) (Lim, 2020).

To date, beauty luxury markets in China have been researched. Motohashi (2015) explained that high-prestige brands like the Clé de Peau Beauté or SHISEIDO were imported and sold only in the department stores in China. Yu (2014) confirmed that younger, middle income shoppers were shaping the market for global high-end brands driven by different dynamics, such as, conspicuous accomplishment and multiple nodes of cosmopolitanism. Wang et al. (2021) claimed that consumers perceived the benefit of sustainable luxury in the emotional aspects, especially evoking guilt-free joy. Very few research, to the knowledge of the authors, has examined luxury brand advertising. This research contributes to literature of advertising strategies, advertising appeals, and advertising executions. It expands the theories to analyze media content on Weibo which is the popular online platform among Chinese people. This research is driven by the follow research questions:

- RQ1: What advertising strategies are most frequently used in short videos from Weibo official accounts by high-prestige cosmetic brands?
- RQ2: What advertising appeals are most frequently used in short videos from Weibo official accounts by high-prestige cosmetic brands?
- RQ3: What advertising executions are most frequently used in short videos from Weibo official accounts by high-prestige cosmetic brands?
- RQ4: Do short videos created by brands tend to use different advertising strategies from short videos created by KOLs?
- RQ5: Do short videos created by brands tend to use different advertising appeals from short videos created by KOLs?
- RQ6: Do short videos created by brands tend to use different advertising executions from short videos created by KOLs?

## LITERATURE REVIEW

The decisions of the advertising strategies, advertising appeals, and advertising executions determine the creative tactics. While advertising strategies direct the core value of the message (Yu, 2011), advertising appeals and executions guide how the message is communicated (Belch & Belch, 2003).

### Advertising strategies

Advertising strategies refer to approaches that determine the overall core value that the message promotes. Yu (2011) explored Weibo advertisement communication strategy in the Web 2.0 era and classified advertising strategies into four types: product advertising, promotion advertising, brand advertising, and activity advertising.

**TABLE 1.** Descriptions of Advertising Strategies.

| No. | Types                 | Description                                                                                                                                                                                                                                                                |
|-----|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Product Advertising   | Product advertising strategies promote products through dissemination of product information by presenting elements associated with the product, including product characteristics, utility, and benefits (Yu, 2011).                                                      |
| 2.  | Promotion Advertising | Promotion advertising strategies focus on promotion information, such as, coupons, gift cards, and discount orders. For example, consumers' promotion messages forwarded by consumers on Weibo help brands achieve twice the results in a short period of time (Yu, 2011). |
| 3.  | Brand Advertising     | Brand advertising strategies highlight brand value and culture by introducing the culture and history of brands, brand personality, brand scale, performance, development process, corporate social responsibility and other brands-related aspects (Yu, 2011).            |
| 4.  | Activity Advertising  | Activity advertising strategies aim to increase the attention of the target consumers and enhance the brand memory, such as, brands can use Weibo Topic Page# to interact with consumers (Yu, 2011).                                                                       |

Source: Yu, 2011.

### Advertising Appeals

Advertising appeals refer to the means to attract the attention of the consumers through a variety of ways. The appeals potentially form underlying content of the advertisement (Belch & Belch, 2003), and gradually affect their attitude towards the appeals of goods or services, and lead to purchase behaviors (He & Qu, 2018). Advertising appeals are categorized into two major types: rational appeals and emotional appeals (Belch & Belch, 2003; Kotler, 2003) as shown in Table 2.

**TABLE 2.** Descriptions of Advertising Appeals.

| No. | Types             | Description                                                                                                                                                                                                                     |
|-----|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Rational Appeals  | Rational appeals center on consumers' utilitarian or functional needs for a product or service through showing the factual information about the product's characteristics, uses, and methods of service (Belch & Belch, 2003). |
| 2.  | Emotional Appeals | The emotional appeals stimulate consumers' psychological or social needs for a product or service by arousing their positive or negative emotions (Belch & Belch, 2003).                                                        |

*Source:* Belch & Belch, 2003.

### **Rational Appeals**

Rational appeals center on consumers' utilitarian or functional needs for a product or service (Belch & Belch, 2003; Kotler, 2003) through showing the factual information about the product's characteristics, uses, and methods of service (Belch & Belch, 2003). Advertising that used rational appeals contained one of the 7 information cues: price of the product or service, quality, function, material, purchasing time and place, any research data about the product, and packaging (Keshari & Jain, 2014). Following Belch and Belch (2003), this article referred to rational appeals as competitive advantage appeals, feature appeals, news appeals, product or service popularity appeals, and favorable price appeals as shown in Table 3. All of which appeal to advantages of a product or service rather than consumers' emotions.

### **Emotional Appeals**

Emotional appeals stimulate consumer's psychological or social needs for a product or service (Belch & Belch, 2003; Kotler, 2003) by arousing their positive or negative emotions (Kotler, 2003). While positive emotions relate to emotions like love, happiness (Keshari & Jain, 2014; Kotler, 2003), and prestige and pride (Keshari & Jain, 2014), negative emotions refer to emotions like fear and a sense of guilt (Keshari & Jain, 2014; Kotler, 2003). Following Belch and Belch (2003), they divided the feelings that can be used as the basis of the emotional appeals into two categories: personal states or emotions and social-based feelings as shown in Table 4. Personal states or feeling appeals include 19 kinds of feelings, such as, achievement, joy accomplishment, nostalgia, affection, pleasure, fear, and grief. Social-based feelings include "approval, affiliation/acceptance, belonging, embarrassment, involvement, recognition, and rejection" (Belch & Belch, 2003, p. 269). Social-based feelings include "approval, affiliation/acceptance, belonging, embarrassment, involvement, recognition, rejection, respect, and status" (Belch & Belch, 2003, p. 269).

**TABLE 3.** Descriptions of Rational Appeals.

| No. | Types                                 | Description                                                                                                                                                                                                                                                                    |
|-----|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Competitive Advantage Appeals         | Competitive advantage appeals highlight the characteristics and advantages of products or services through the comparative analysis of advertising information (Belch & Belch, 2003).                                                                                          |
| 2.  | Feature Appeals                       | Feature appeals mainly focus on conveying product characteristics, performance, and purchase benefits. The appeals tend to be highly informative (Belch & Belch, 2003).                                                                                                        |
| 3.  | News Appeals                          | News appeals refer to news or reports about products, services or company advantages. The appeals can be applied to new products or services (Belch & Belch, 2003).                                                                                                            |
| 4.  | Product or Service Popularity Appeals | Product or service popularity appeals refer to emphasizing the popularity of products or services by indicating the number of consumers of a certain brand, the number of experts recommending the brands (KOLs), or the brands' position in the market (Belch & Belch, 2003). |
| 5.  | Favorable Price Appeals               | Favorable price appeals focus on making price the core advantage. They are often used in the promotion activities of retailers (Belch & Belch, 2003).                                                                                                                          |

Source: Belch & Belch, 2003.

**TABLE 4.** Descriptions of Emotional Appeals.

| No. | Types                              | Description                                                                                                                                                                       |
|-----|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Personal States or Feeling Appeals | Personal states or feeling appeals include 19 kinds of feelings, such as, achievement, joy accomplishment, nostalgia, affection, pleasure, fear, and grief (Belch & Belch, 2003). |
| 2.  | Social-based Feelings Appeals      | Social-based feelings include approval, affiliation or acceptance, belonging, embarrassment, involvement, recognition, rejection, respect, and status (Belch & Belch, 2003).      |

Source: Belch & Belch, 2003.

### Advertising Executions

Advertising executions refer to “the manner in which an advertising appeal is used to communicate with the audience. Advertising appeals are used to elicit a response from the audience” (Belch & Belch, 2003, p. 267 - 275). Execution is the way an advertising appeal is presented, and a variety of execution styles can carry out particular appeals (Belch & Belch, 2003). Following Belch and Belch (2003), they referred to 11 advertising executions which are “straight sell, scientific or technical evidence, demonstrations, comparison, testimonial, slice of life, animation, personality symbol, imagery, dramatization, and humor (Belch & Belch, 2003) as shown in Table 5.

**TABLE 5.** Description of Advertising Executions.

| No. | Types                            | Description                                                                                                                                                                                               |
|-----|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Straight Sell                    | Straight-sell executions provide basic or factual information about the brands without employing feelings or special tricks (Belch & Belch, 2003).                                                        |
| 2.  | Scientific or Technical Evidence | Scientific or technical evidence executions use scientific or technical evidence or information in the advertising to prove a claim (Belch & Belch, 2003).                                                |
| 3.  | Demonstration                    | Demonstration executions show a product or service in actual use or in certain scenarios to illustrate its critical advantages or benefits (Belch & Belch, 2003).                                         |
| 4.  | Comparison                       | Comparison executions mean comparing a brand against the competition directly or indirectly (Belch & Belch, 2003).                                                                                        |
| 5.  | Testimonials                     | Testimonials are popular forms for advertisers to present their advertising messages. A person promotes a product or service by telling his or her personal experience of using it (Belch & Belch, 2003). |
| 6.  | Slice of Life                    | Slice of life executions show how the advertisers' product or service can solve problems that consumers encounter (Belch & Belch, 2003).                                                                  |
| 7.  | Animation                        | Animation is to use animated characters or scenes drawn by artists or on the computer to attract consumers (Belch & Belch, 2003).                                                                         |
| 8.  | Personality Symbols              | Personality symbols involve using a central character or personality symbol to deliver the advertising message and with which the product or service can be easily identified (Belch & Belch, 2003).      |
| 9.  | Fantasy                          | Fantasy executions show an imaginary situation or illusion involving a consumer and the product or service (Belch & Belch, 2003).                                                                         |
| 10. | Dramatization                    | Dramatization refers to the creation of a suspenseful situation or scenario in the form of a short story (Belch & Belch, 2003).                                                                           |
| 11. | Humor                            | Humor introduces products, services, and brands in a humorous way to narrow the distance with consumers quickly (Belch & Belch, 2003).                                                                    |

## METHOD

This research used content analysis to examine advertising and message strategies used in 84 short videos from 7 Weibo official accounts by high-prestige cosmetic brands. The method is “a research technique for making replicable and valid inferences from data to their content” (Krippendorff, 1989, p. 403). The method, thus, allows the authors to reveal

the frequency of the use of strategies, advertising appeals and advertising executions in the sampled videos. Three aspects of the video content were coded: advertising strategies, advertising appeals, and advertising executions.

## Sample

A sample of 84 short videos from 7 Weibo official accounts by high-prestige cosmetic brands published between January 1, 2018 and December 31, 2020 was a unit of analysis. This time frame is appropriate, as evidenced by an increase in online sales volume of cosmetic brands. In 2018, the proportion of online retail sales of cosmetic gradually increased, accounting for 74.2% of the total retail sales in 2018. Moreover, short video advertising has become the main channel of Chinese product sales in the period of Internet development (chyxx, 2018).

Following Wang (2016), this article defined high-prestige cosmetic as cosmetic that belongs to the luxury product. It is sold only in high-prestige department stores (Motohashi, 2015) or official websites, with an average price of more than 600 yuan (Yang, 2012). The sample was purposively selected based on the list of top 10 cosmetic sales of Taobao double 11 Shopping Festival in 2016-2020. Short videos by the 7 international high-prestige cosmetic brands were selected: Estée Lauder, Lancôme, SK-2, Whoo, Sulwhasoo, Shiseido, and La Mer (Intellasia East Asia News, 2020).

For Weibo official accounts by each brand, short videos were produced not only by cosmetic brands but also by KOLs who were invited to endorse the brands. Accordingly, the study selected 6 short videos by each cosmetic brand that were produced by the brands themselves and another 6 were produced by KOLs. Therefore, 12 short videos by each cosmetic brand were recruited, yielding a total of 84 short videos.

Table 6 lists 7 international high-prestige cosmetic brands whose short videos on Weibo were selected in this study

**TABLE 6.** International High-Prestige Cosmetic Brands in China.

| No. | Brands       | Weibo Account         | Number of Followers | Highest Numbers of Video Likes |
|-----|--------------|-----------------------|---------------------|--------------------------------|
| 1.  | Estée Lauder | 雅诗兰黛                  | 3.61 million        | 115,527                        |
| 2.  | Lancôme      | 兰蔻 LANCOME            | 2.35 million        | 719,466                        |
| 3.  | SK-2         | SK-II                 | 1.3 million         | 42,352                         |
| 4.  | Whoo         | The_History_Of_Whoo 后 | 1.14 million        | 46,342                         |
| 5.  | Sulwhasoo    | 雪花秀 Sulwhasoo         | 0.98 million        | 112,404                        |
| 6.  | Shiseido     | SHISEIO 资生堂官方微博       | 0.96 million        | 22,076                         |
| 7.  | Lamer        | LAMER 海蓝之谜            | 0.57 million        | 33,162                         |

## Procedure

Initially, a sample of 84 short videos from 7 Weibo official accounts by high-prestige cosmetic brands was recruited. Weibo is appropriate to study advertising and message strategies of video advertising for two major reasons. First, Weibo is one of the leading social media in China with an average of 521 million users, and 38,000 brands have registered official accounts on Weibo (Weibo Report, 2020). Second, as many as 81.5% of users have made a purchase after watching Weibo short videos (iResearch, 2018). Third, the total number of Weibo KOLs in various fields has reached 400,000 KOLs.

In the second stage, two coders who were graduate students in the MA Global Communication program at Bangkok University designed the codebook and code sheet. One of them was the first author of this article. The coders agreed on the explanations of coding categories and instructions. The coders recorded the presence of elements indicated in the coding scheme (Table 7):

1. Coding scheme based on general information: brand names, countries of origin, years of video published, types of products, and sources.
2. Coding scheme based on reviewed literature (Belch & Belch, 2003; Yu, 2011): advertising strategies, advertising appeals, and advertising executions.

In the pilot test, the coders coded a sample of 42 videos to check for accuracy and intercoder reliability of the coding instrument. Descriptive statistics (frequency and percentage) were used to analyze the data. Following Perrault and Leigh (1989)'s formula, the average of intercoder reliability was .87 which is within the range of acceptable intercoder reliability.

**TABLE 7.** General Coding Scheme.

|                          |               |   |
|--------------------------|---------------|---|
| Brand Names              | Estée Lauder  | 1 |
|                          | Lancôme       | 2 |
|                          | SK-2          | 3 |
|                          | Whoo          | 4 |
|                          | Sulwhasoo     | 5 |
|                          | Shiseido      | 6 |
|                          | La Mer        | 7 |
| Countries of Origin      | France        | 1 |
|                          | Japan         | 2 |
|                          | America       | 3 |
|                          | Korea         | 4 |
| Years of Video Published | 2021          | 1 |
|                          | 2020          | 2 |
|                          | 2019          | 3 |
|                          | 2018          | 4 |
|                          | 2017          | 5 |
| Types of Products        | Skin Care     | 1 |
|                          | Personal Care | 2 |
|                          | Cosmetic      | 3 |
| Sources                  | Brands        | 1 |
|                          | KOLs          | 2 |



**TABLE 7.** (Continued 1)

|                        |                                       |    |
|------------------------|---------------------------------------|----|
| Advertising Strategies | Product Advertising                   | 1  |
|                        | Promotion Advertising                 | 2  |
|                        | Brand Advertising                     | 3  |
|                        | Activity Advertising                  | 4  |
| Rational Appeals       | Competitive Advantage Appeals         | 1  |
|                        | Feature Appeals                       | 2  |
|                        | News Appeals                          | 3  |
|                        | Product or Service Popularity Appeals | 4  |
|                        | Favorable Price Appeals               | 5  |
| Emotional Appeals      | Personal States or Feeling Appeals    | 1  |
|                        | Social-Based Feelings Appeals         | 2  |
| Advertising Executions | Straight Sell                         | 1  |
|                        | Scientific or Technical Evidence      | 2  |
|                        | Demonstration                         | 3  |
|                        | Comparison                            | 4  |
|                        | Testimonial                           | 5  |
|                        | Slice of Life                         | 6  |
|                        | Animation                             | 7  |
|                        | Personality Symbols                   | 8  |
|                        | Fantasy                               | 9  |
|                        | Dramatization                         | 10 |
|                        | Humor                                 | 11 |

### Coding Scheme

Table 7 illustrates coding scheme that was mainly drawn from literature discussed in the literature review section to understand advertising and message strategies in short videos from Weibo official accounts by high-prestige cosmetic brands.

RQ1 examined the core advertising strategies used in short videos from Weibo official accounts by high-prestige cosmetic brands. The coding scheme relied on the framework by Yu (2011) which consisted of 4 strategies: product advertising, promotion advertising, brand advertising, and activity advertising.

RQ2 examined the core advertising appeals used in short videos from Weibo official accounts by high-prestige cosmetic brands. The coding scheme relied on the framework by Belch and Belch (2003) which consisted of 2 main types: rational appeals and emotional appeals. Rational appeal subcategories consisted of competitive advantage appeals, feature appeals, news appeals, product or service popularity appeals, and favorable price appeals. Emotional appeals consisted of personal states or feeling appeals and social-based feeling appeals.

RQ3 examined the core advertising appeals used in short videos from Weibo official accounts by high-prestige cosmetic brands. The coding scheme relied on the framework by Belch and Belch (2003) which consisted of 11 types: straight sell, scientific or technical evidence, demonstration, comparison, testimonial, slice of life, animation, personality symbol, imagery, dramatization, and humor.

RQ4, 5, and 6 compared the core advertising strategies (RQ4), appeals (RQ5), and executions (RQ6) used in short videos that were created by brands vs KOLs.

## FINDING

The findings reveal interesting insights as follows:

RQ1: What advertising strategies are most frequently used in short videos from Weibo official accounts by high-prestige cosmetic brands?

The results shown in Table 8 indicated that the primary advertising strategies used in Weibo short videos by international high-prestige cosmetic brands were product advertising (64.2%), followed by activity advertising (16.5%), brand advertising (13.8%), and promotion advertising (5.5%).

**TABLE 8.** Advertising Strategies in the Sampled Videos

(n = 84)

| Item                  | Frequency | Percentage |
|-----------------------|-----------|------------|
| Product Advertising   | 70        | 64.2%      |
| Promotion Advertising | 6         | 5.5%       |
| Brand Advertising     | 15        | 13.8%      |
| Activity Advertising  | 18        | 16.5%      |

\*multiple selections permitted

RQ2: What advertising appeals are most frequently used in short videos from Weibo official accounts by high-prestige cosmetic brands?

The results shown in Table 9 indicated that rational appeals were accounted for 55.8% while emotional appeals were accounted for 44.2%. For rational appeals, feature appeals (69.4%) dominated the sampled videos, followed by competitive advantage appeals (12.5%), news appeals (11.1%), favorable price appeals (5.6%) and product or service popularity appeals (1.4%) as shown in Table 10. For emotional appeals, personal states or feeling appeals were accounted for 87.7% while social-based feeling appeals was accounted for 12.3% as shown in Table 11.

Table 9.

**TABLE 9.** Advertising Appeals in the Sampled Videos

(n = 84)

| Item              | Frequency | Percentage |
|-------------------|-----------|------------|
| Rational Appeals  | 72        | 55.8%      |
| Emotional Appeals | 57        | 44.2%      |

\*multiple selections permitted

**TABLE 10.** Rational Appeals in the Sampled Videos

(n = 84)

| Item                                  | Frequency | Percentage |
|---------------------------------------|-----------|------------|
| Competitive Advantage Appeals         | 9         | 12.5%      |
| Feature Appeals                       | 50        | 69.4%      |
| News Appeals                          | 8         | 11.1%      |
| Product or Service Popularity Appeals | 1         | 1.4%       |
| Favorable Price Appeals               | 4         | 5.6%       |

\*multiple selections permitted

**TABLE 11.** Emotional Appeals in the Sampled Videos

(n = 84)

| Item                               | Frequency | Percentage |
|------------------------------------|-----------|------------|
| Personal States or Feeling Appeals | 50        | 87.7%      |
| Social-Based Feeling Appeals       | 7         | 12.3%      |

\*multiple selections permitted

RQ3: What advertising executions are most frequently used in short videos from Weibo official accounts by high-prestige cosmetic brands?

The results shown in Table 12 indicated that the primary advertising executions were testimonial (21.1%) and demonstration (21.1%), followed by straight sell (18.6%), fantasy (14.3%), slice of life (9.3%), dramatization (5.6%), humor (4.3%), scientific or technical evidence (3.7%), and animation (1.9%).

**TABLE 12.** Advertising Executions in the Sampled Videos

(n = 84)

| Item                             | Frequency | Percentage |
|----------------------------------|-----------|------------|
| Straight Sell                    | 30        | 18.6%      |
| Scientific or Technical Evidence | 6         | 3.7%       |
| Demonstration                    | 34        | 21.1%      |
| Comparison                       | 0         | 0%         |
| Testimonial                      | 34        | 21.1%      |
| Slice of Life                    | 15        | 9.3%       |
| Animation                        | 3         | 1.9%       |
| Personality Symbols              | 0         | 0%         |
| Fantasy                          | 23        | 14.3%      |
| Dramatization                    | 9         | 5.6%       |
| Humor                            | 7         | 4.3%       |

\*multiple selections permitted

RQ4: Do short videos created by brands tend to use different advertising strategies from short videos created by KOLs?

The results shown in Table 13 indicated that product advertising was most frequently used in short videos in Weibo produced both by brands and by KOLs.

For the short videos created by brands (n = 42), the primary strategies were product advertising (56.1%), followed by activity advertising (19.3%), brand advertising (14.0%), and promotion advertising (10.5%).

For the short videos created by KOLs (n = 42), the primary strategies were product advertising (73.1%), followed by activity advertising (13.5%), and brand advertising (13.5%).

**TABLE 13.** Advertising Strategies in the Sampled Videos by Brands  
(n = 42) and KOLs (n = 42)

| Item   | Category              | Frequency | Percentage |
|--------|-----------------------|-----------|------------|
| Brands | Product Advertising   | 32        | 56.1%      |
|        | Promotion Advertising | 6         | 10.5%      |
|        | Brand Advertising     | 8         | 14.0%      |
|        | Activity Advertising  | 11        | 19.3%      |
| KOLs   | Product Advertising   | 38        | 73.1%      |
|        | Promotion Advertising | 0         | 0%         |
|        | Brand Advertising     | 7         | 13.5%      |
|        | Activity Advertising  | 7         | 13.5%      |

\*multiple selections permitted

RQ5: Do short videos created by brands tend to use different advertising appeals from short videos created by KOLs?

The results shown in Table 14 indicated that rational appeals were most frequently used in short videos in Weibo produced by brands and by KOLs.

For the short videos created by brands (n = 42), the primary appeals were rational appeals (57.1%), followed by emotional appeals (43.0%).

For the short videos created by KOLs (n = 42), the primary appeals were rational appeals (50.7%), followed by emotional appeals (49.3%).

**TABLE 14.** Advertising Strategies in the Sampled Videos by Brands  
(n = 42) and KOLs (n = 42)

| Item  | Category          | Frequency | Percentage |
|-------|-------------------|-----------|------------|
| Brand | Rational Appeals  | 28        | 57.1%      |
|       | Emotional Appeals | 21        | 43.0%      |
| KOLs  | Rational Appeals  | 34        | 49.3%      |
|       | Emotional Appeals | 35        | 50.7%      |

\*multiple selections permitted

The results shown in Table 15 indicated that feature appeals were the dominant appeals used in short videos in Weibo created by both brands and KOLs.

For the short videos created by brands (n = 42), the primary appeals were feature appeals (65.7%), followed by news appeals (21.9%), followed by favorable price appeals (9.4%),

and product or service popularity appeals (3.1%). As China's advertising laws and regulation do not allow for advertising that uses competitive advantage appeals, this subcategory do not apply for this study.

For the short videos created by KOLs (n = 42), the primary appeals used in Weibo short videos were feature appeals (72.5%), followed by competitive advantage appeals (22.5%), favorable price appeals (2.5%), and news appeals (2.5%).

**TABLE 15.** Advertising Appeals in the Sampled Videos by Brands (n = 42) and KOLs (n = 42)

| Item   | Category                           | Frequency | Percentage |
|--------|------------------------------------|-----------|------------|
| Brands | Competitive Advantage Appeals      | 0         | 0%         |
|        | Feature Appeals                    | 21        | 65.7%      |
|        | News Appeals                       | 7         | 21.9%      |
|        | Product/Service Popularity Appeals | 1         | 3.1%       |
|        | Favorable Price Appeals            | 3         | 9.4%       |
| KOLs   | Competitive Advantage Appeals      | 9         | 22.5%      |
|        | Feature Appeals                    | 29        | 72.5%      |
|        | News Appeals                       | 1         | 2.5%       |
|        | Product/Service Popularity Appeals | 0         | 0%         |
|        | Favorable Price Appeals            | 1         | 2.5%       |

\*multiple selections permitted

The results shown in Table 16 indicated that the personal states or feeling appeals were mostly used in short videos in Weibo produced by both brands and KOLs.

For the short videos created by brands (n = 42), the primary appeals were social-based feeling appeals (68.0%), and followed by personal states or feeling appeals (32.0%).

For the short videos created by KOLs (n = 42), the primary appeals were personal states or feeling appeals (85.7%), and followed by social-based feeling appeals (14.3%).

**TABLE 16.** Emotional Appeals in Short Videos by Brands (n = 42) and KOLs (n = 42)

| Item  | Category                   | Frequency | Percentage |
|-------|----------------------------|-----------|------------|
| Brand | Personal States or Feeling | 16        | 32.0%      |
|       | Social-based Feeling       | 34        | 68.0%      |
| KOLs  | Personal States or Feeling | 6         | 85.7%      |
|       | Social-based Feeling       | 1         | 14.3%      |

\*multiple selections permitted

RQ6: Do short videos created by brands tend to use different advertising executions from short videos created by KOLs?

The results shown in Table 17 indicated fantasy was mostly used in short videos in Weibo created by brands while demonstration and testimonial were mostly used in short videos in Weibo produced by KOLs.

For the short videos created by brands (n = 42), the primary advertising executions were fantasy (27.1%), followed by demonstration (14.6%), testimonial (12.5%), straight sell (10.4%), dramatization (10.4%), scientific or technical evidence (10.4%), slice of life (6.3%), animation (6.3%), and humor (6.3%).

For the short videos created by KOLs (n = 42), the primary appeals used in Weibo short videos were testimonial (24.1%) and demonstration (24.1%), followed by straight sell (22.3%), slice of life (10.7%), fantasy (8.9%), dramatization (3.6%), humor (3.6%), and scientific or technical evidence (2.7%).

**TABLE 17.** Advertising Executions in Short Videos by Brands

(n = 42) and KOLs (n = 42)

| Item   | Category           | Frequency | Percentage |
|--------|--------------------|-----------|------------|
| Brands | Straight Sell      | 5         | 10.4%      |
|        | Scientific         | 3         | 6.3%       |
|        | Demonstration      | 7         | 14.6%      |
|        | Comparison         | 0         | 0%         |
|        | Testimonial        | 6         | 12.5%      |
|        | Slice of Life      | 3         | 6.3%       |
|        | Animation          | 3         | 6.3%       |
|        | Personality Symbol | 0         | 0%         |
|        | Fantasy            | 13        | 27.1%      |
|        | Dramatization      | 5         | 10.4%      |
|        | Humor              | 3         | 6.3%       |
| KOLs   | Straight Sell      | 25        | 22.3%      |
|        | Scientific         | 3         | 2.7%       |
|        | Demonstration      | 27        | 24.1%      |
|        | Comparison         | 0         | 0%         |
|        | Testimonial        | 27        | 24.1%      |
|        | Slice of Life      | 12        | 10.7%      |
|        | Animation          | 0         | 0%         |
|        | Personality Symbol | 0         | 0%         |
|        | Fantasy            | 10        | 8.9%       |
|        | Dramatization      | 4         | 3.6%       |
|        | Humor              | 4         | 3.6%       |

\*multiple selections permitted

## DISCUSSION AND CONCLUSION

This article explored the dominant advertising strategies, advertising appeals, and advertising executions in Weibo short videos by leading international high-prestige cosmetic brands. The results from a content analysis of 84 short videos from 7 Weibo official accounts by high-prestige cosmetic brands yielded the following arguments.

First, the results indicated that rational appeals, in particular, feature appeals were the dominant appeals. Testimonial and demonstration were the most frequently used execu-

tions. The results are in contrast with Sun (2018)'s findings which proposed that emotional appeals and imagery executions were most frequently used in high-end cosmetic television commercials that were aired in China between 2009 and 2019. The results by these two works point out that different message strategies of advertising content are required for content creation on different media.

On Weibo, product reviews serve as an effective strategy for promoting sales, especially, if KOLs are specialized in the products that they review (De Cicco et al., 2020). Product knowledge and demonstrations are useful content that consumers are looking for (De Cicco et al., 2020). The use of rational appeals through testimonial and demonstration executions allows advertisers to engage with target consumers and to achieve one of the advertisers' goal, which is, consumers making a purchase. The processes are also supported by technological affordances that allow influencers to add a link from the posts of reviewed products to product pages and make a purchase (Agency China, 2017). Unlike advertising broadcast on television in China, media content is restricted by different factors, such as, limited numbers of national TV channels and TV airtime cost (Barnes et al., 2009). During the airtime, advertising is aimed at activating consumer awareness "as it enlivens the mind to receive sales messages" (Anderson, 1982) within only 15 seconds to a few minutes. Mostly, product knowledge and demonstration are framed by only advertisers: the brand's key messages are highlighted rather than other consumers' experiences with the products. In the cosmetic categories, advertisers rely on advertising appeals by using "actors or celebrities dressed and behaving in ways that embody values, aspirations, dreams and fantasies" (Blair, 2018, p. 53) to enliven the consumers' mind.

Second, the results indicated that the videos created by KOLs mainly relied on feature appeals. The results are in contrast with Belch & Belch (2003) which proposed that consumer purchase decisions for some product categories, such as, cosmetic and certain personal care products, were made on the basis of both emotional and rational motives. Moreover, the results are also in contrast with Liu, Lin and Wu (2017)'s findings which studied the effects of advertising appeals by different types of endorsers. KOLs mainly used emotional appeals because they better aligned with the nature of beauty content and also featured a URL link to other important Page or websites.

Third, while the videos created by brands mainly relied on fantasy executions, the videos created by KOLs largely used testimonials and demonstration executions. For fantasy executions, they helped create visual associations between images/symbols and the cosmetic brands (Belch & Belch, 2003). The brand association (Aaker & Biel, 2013) encompassed all brand-related elements, such as, pictures, experiences, perceptions and attitudes (Kotler & Keller, 2006), all of which helped establish a brand image. Supported by (Lee, Goh, & Noor, 2019), when consumers purchased skincare products, they simultaneously purchased the images associated with the products. For testimonial and demonstration executions, they fitted with the nature of user-generated content created by Weibo KOLs. Brands relied on product reviews and recommendations by KOLs to ensure brand credibility and increase media exposure (Chozan, 2021). Testimonial executions allowed consumers to explore products' user experiences by different KOLs whom they usually trusted. Demonstration executions convinced consumers by showing the utility and advantages of the products in actual use (Belch & Belch, 2003).

## **LIMITATION**

This research's prime limitation is that it did not include the 19 personal states and 9 social-based feelings under the emotional appeals categories by Belch and Belch (2003). The coding scheme included only the emotional categories which are divided into two subcategories: personal states and social-based feelings. However, 19 personal states and 9 social-based feelings should be included in the coding scheme for further research.

## **RECOMMENDATIONS**

This research sheds light on advertising and message strategies in Weibo short videos by high-prestige cosmetic brands that were popular among Chinese consumers. The research results lend themselves to provide practical guidance for international luxury cosmetic brands that aim to enter the Weibo advertising landscape.

First, product advertising strategies should be the core strategies in creative campaigns by both brands and KOLs, as the product knowledge helps make the video attractive. Second, fantasy executions have been an essence of advertising messages in cosmetic product categories (Belch & Belch, 2003). Brands should include the executions to show imagination and visual attractions related to the products and brands (Belch & Belch, 2003). Third, effective influencer marketing depends largely on content by KOLs. In the case of cosmetic Weibo advertising, KOLs created their video content by focusing on feature appeals and personal states and feeling appeals (e.g. happiness, fear, love). Testimonials are the core strategies that may be used together with other executions, such as, demonstration. Further research may consider including emotional appeals' 19 personal states and 9 social-based feelings in the coding scheme to deepen an understanding of the emotional appeals used in creative content. Moreover, a comparative work of advertising and message strategies used to create content in different popular social networking sites for Chinese consumers would yield useful insights.



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**LINKING CORPORATE SOCIAL RESPONSIBILITY TO CORPORATE  
REPUTATION AND ITS EFFECTS ON CUSTOMER LOYALTY  
AND PURCHASE INTENTION: A CASE STUDY OF VINGROUP**

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**ABSTRACT**

This study aims to determine the relationship between corporate social responsibility and company reputation and how this relationship promotes customer loyalty and purchasing behavior in the marketplace. A sample of 311 responders was chosen from 374 responses to test four hypotheses using structural equation modeling, based on previous research on corporate social responsibilities, company reputation, and customers' behavioral intentions (SEM). The findings support CSR's favorable impact on customer loyalty and purchasing intent. As a result of Vingroup's CSR operations, consumers are likely to recommend its products since they believe Vingroup is a responsible corporation. In practice, the corporation should carry out CSR strategically by integrating philanthropy with three additional forms of CSR approaches to combine the CSR strategy with the business strategies, vision, and mission to guarantee the firm's long-term viability.

**KEY WORDS:** Corporate Social Responsibility, Corporate Reputation, Customers Behavioral Intention, Trust; Loyalty, Purchase Intention

## INTRODUCTION

Corporate Social Responsibility (CSR) began to propagate in the 1990s period. It started with a premise that businesses would gain public attention due to their contributions and accountability for society's long-term improvement, which are reflected in their social actions. When a corporation is filled with four types of CSR initiatives, including economic, legal, ethical, and philanthropic obligations, it is assumed to have met its social responsibilities (Carroll, 1999). Comprehensive studies have proved that CSR contributes various benefits to both markets and society, including brand equity and reputation (Fatma, Rahman & Khan, 2015), financial performance (Inoue, Kent & Lee, 2011), and stakeholder relations (S. Sen, 2006). Undeniably, CSR plays a vital position in the long-term sustainable development of corporates.

CSR impacts diverse aspects of the modern business industry; nevertheless, this study looks into the relationship between CSR tactics and Corporate Reputation (CR). As defined as stakeholder recognition (Fombrun et al., 2000), CR is the determinants that lead to stakeholder determinations (Maden, Arikan, Telci & Kantur, 2012).

Several researchers have investigated the related concepts between CSR and CR; however, most current literary works favour emphasizing the interconnection (Maden et al., 2012; Maignan, 2001). Proven studies have shown how consumers respond to a company's CSR activities and impacts on reputation (Brammer & Pavelin, 2006). To be precise, researchers were implying that CR results from a firm's execution. Moreover, CSR operations considerably reshape how a company presents itself to the stakeholder. Furthermore, businesses devote themselves to social obligations and contribute to the mutual advancement of society to enhance their image and brand awareness (Sankar Sen & Bhattacharya, 2001). This operation's indirect cause is allegedly associated with customer behaviours and beliefs in approaching new products and services based on the firm's status, and a stellar reputation erases pessimistic consumers' perceptions (Hsu, 2012).

Even though concern in this field is positively rising, the quantity of trustworthy research examining trust's value in building CR is inadequate (Hur, Kim & Woo, 2014), notably in Vietnam. CSR-related research and its impact on the market gain little concentration in economically developing countries like Vietnam since the financial gain is a priority for most partnerships (Preuss, Barkemeyer & Glavas, 2016). One of the few studies to discuss focusing solely on the field of CSR and firm value (Nguyen, Tran, Le, Nguyen, Trinh & Le, 2015); or the influences of CSR on the enterprises' performance (Qu, 2009); or extending the application on the CSR responsibility in Vietnam healthcare field (Trong Tuan, 2012). The topic mentioned above has not been investigated in terms of faith as a mediating pathway connecting CSR and CR. As a result, this study strives to accomplish the literature gap with the case study from Vingroup Joint Stock Company.

## LITERATURE REVIEW

### **Background Information: Vingroup Joint Stock Company**

Vingroup began operations in Ukraine as Technocom Corporation in 1993. Vingroup enrolled the Vietnamese market in the early 1990s, focusing on tourism and real estate, with Vincom and Vinpearl serving as essential strategic brands. January 2012 witnessed the born

of Vingroup Joint Stock Company which renowned as an amalgamation between Vinpearl JSC and Vincom JSC. With USD 16 billion market capitalization by achieving alluring successes, Vingroup maintains its distinguished ranking in Asia as a preeminent private conglomerate. Even though they have a multidisciplinary orientation, Vingroup counted the most on three principal sectors: Technology, Industrials, Property, and Services. Vingroup continues to create customer trends in various divisions, advancing a new and prevailing lifestyle to the Vietnamese market while guaranteeing the international quality of its products. The company is renowned for its prestige and is undoubtedly the ablest private corporation in the country.

According to the Ho Chi Minh City Stock Exchange, Vingroup's stock settles at the top ten of the market, proving its long-term strength and growth. Vingroup places a premium on societal development because they believe that focusing on revenue and profit cannot lead the company to success. A long list of practical actions taken in response to the environmental crisis has confirmed their words. With a robust financial base, Vingroup is willing to invest billions in fulfilling social duties, earning them the distinction of being one of Vietnam's most environmentally conscious businesses. "Kind Heart Foundation" and "Sharing Is Happiness" are two standard instances. Vingroup has provided financial assistance for welfare houses, family endowment, health checkups, heart operation, and other therapies for life-threatening diseases and poverty-stricken patients through these programs.

Furthermore, they perform surpassing and meaningful performances for the society, such as performing community service, constructing paths with streetlights, and providing technical training to agricultural households. Intending to improve the Vietnamese people's state of life, Vingroup is constantly adjusting its commodities and services while focusing on long-term elements, social projects, and economic development to fulfil their societal commitment. Vingroup would be used as a case study in this research to demonstrate and reflect the beforehand discussed relationship between CSR and CR.

### **Corporate Social Responsibility**

CSR is the metric used to assess their rank in the market as it is an indispensable component of industry language, practicals and expectation of stakeholder society (Carroll, 1999). Moving forward to the twenty-first century, Joyner and Payne (2002) elaborated on the previous methodological approach and came to an end with the conclusion that moral and socially responsible behaviour positively impacted the firm's operating statement. Unquestionably, the notable progress in CSR initiatives is distinguished and appreciated by several as a source of being a prestigious business in the extremely competing marketplace (Lii & Lee, 2012). Firms believed that the practices of considerable funding in CSR activities would reinforce intangible assets such as the moral capital and the reputation of businesses (Godfrey, 2005; Lii & Lee, 2012).

### **Corporate Reputation**

In multiple disciplines, there are copious explanations of CR. Depending on its relevance to all-inclusive terms of methods, the definition has been expressed in multiple ways. In economics, CR is concerned as a reflection on a company's previous activities (Weiss et al., 1999) and its "true" attribute under the marketplace's perspective towards multiple stakeholders (Weigelt & Camerer, 1988). In strategic management, CR is the valuable standard to evaluate intangible assets (Smaiziene & Jucevicius, 2009), which are formed

from various social dimensions, influencing the perceptions of multiple stakeholders (Deephouse, 2000). In sociology disciplines, a firm's status in the marketplace is a measure of legitimacy (Grund, 1996).

To put it in another way, they are regarded as the collective assessments of the company's accomplishment in terms of expectations and social customs in their shared institutional context. Ultimately, Fombrun, Gardberg and Sever (2000) depict CR in the marketing field as a combined business outcome based on stakeholders' aggregate insights. Besides, from a marketing standpoint, CR is an essential display factor to entice purchasers' attentiveness, boost their loyalty, and guide the selling-buying manners (Bontis et al., 2007a; Lin et al., 2006). However, multiple researchers who have investigated an interpretation of the CR's concepts admit that CR is the firm's potential for clients to identify and perceive the position of a specific business among a dozen other firms. (Camic, 1992; Rose & Thomsen, 2004).

### **Customer Loyalty**

Customers' commitment is shifting to the critical factors among the most essential and critical strategic concern in loyal marketing theory, as customer loyalty at both the aggregate and individual levels is believed to affect company performance positively (H. Park, 2006, p. 200). The study stated that the company's acquisition is exponentially comparable to the number of loyal consumers (Reichheld, 1993; Reichheld & W. Earl Sasser, 1990).

Following extensive research into the concept of loyalty, researchers have concluded. Notably, Oliver (2014) has addressed customer loyalty, which tends to commit to consuming products or services from a specific company regularly in the long run, despite external factors and rival company marketing campaigns, which are the primary potential reasons for customers' switching intention. Apart from Lam et al. (2004), the researcher holds a belief that loyalty consumers are people who wholeheartedly approve all perspectives of a business, such as its goods, services, and brand equity. Although there are other definitions of the concept, most early research expresses it in terms of behavioural and baseline definitions. Various viewpoints of loyalty, such as attitudes and habits, are considered a common approach to analyzing customer loyalty (Chaudhuri & Holbrook, 2001; Uncles et al., 2003). Under the aspect of repurchase, satisfaction or lack of substitute products are the first two determinants constituting customers' loyalty. In reverse, intrinsic loyalty implies that a positive review is the outcome of an existing association between the customer and the firm, which would convey the potential loyalty.

In general, customer loyalty is examined from both behavioural and attitude aspects. Because measuring in both perspectives is necessary to accurately verify the quality of customer loyalty (Martínez & Rodríguez del Bosque, 2013). This research will use the term "customer loyalty behaviour" to express both aspects.

### **Corporate Reputation and Its Effect on Loyalty and Purchase Intention**

The literature has confirmed that many firms acquired positive impressions on loyalty and purchase intention for the reputable status of the firm (Caruana & Ewing, 2010; Gatti et al., 2012). Regarding customer loyalty, a good standing in the market reinforces a high level of customer loyalty towards the business (Fombrun et al., 2000). According to the multidisciplinary richness of loyalty studies, customers who maintain a devotion to trust

and a favourable opinion to maintain using a particular company's products are more likely to recommend the company to others (Zeithaml et al., 1996). In other words, the firm's distinguished reputation could develop the level of customer loyalty (Fombrun et al., 2000) significantly. Following that, de Matos & Rossi (2008) indicate that when customer fulfilment and trust rose, consumers would spread positive word of mouth to prove their will to engage with companies' products in the fullness of time. As a result, a reputable company strengthens its credibility among stakeholders in all market activities. Therefore, prestige affects a consumer's future dedication and purpose (Bartikowski et al., 2011). Since there is no flag to confirm the actual source or quality of the product, a business that had a confident image would make customers feel more guarded when purchasing the product (Maden et al., 2012). Consequently, threats from competitors' replacements are reduced by the company's eminence (Walsh et al., 2006).

### **Hypotheses Development**

According to Brown and Dacin (1997), information about company characteristics and values obtained from CSR activities builds the level of customer trust. Furthermore, moral practices in a company's decision-making process are among the most effective methods for companies to obtain positive awareness and construct trust with their stakeholders (Carroll, 1999; Hosmer, 1994; Osterhus, 1997; Pivato et al., 2007). By way of explanation, businesses concerned with developing social welfare would experience a high degree of consumer trust (Du et al., 2007). With these contentions, the following hypothesis is proposed in this study:

H1: Consumer perception of CSR activities has a positive impact on trust

Hill, Fishbein and Ajzen (1977) indicated that trust is a belief related to honesty associated with moral values. Furthermore, trust is perceived, while reputation displays overall evaluation (Fazio & Williams, 1986). Considering, customers make an overall assessment and perception of a company's representation, products and services based on their beliefs and knowledge of its responsible public relations behaviour. If the company meets its social obligations, it will positively impact CR (J. Park et al., 2014). With these contentions, the following hypothesis is proposed in this study:

H2: Consumer trust has a positive impact on CSR activities

Walsh and Wiedmann (2004) suggested that top company fame is closely correlated to customer loyalty. In order to maintain customers, the reputable company urges its employees to concentrate on providing high-quality products and services as a guarantee of quality to customers, which inspires customer loyalty (Bontis et al., 2007b)s. Additionally, customers suppose to minimize transaction costs and risks when deciding on a renowned label (Dierickx & Cool, 1989; Rose & Thomsen, 2004; Walsh et al., 2009). When consumers want to utilize a brand-new product, they prefer a well-known brand to an unknown one. Thus, reputation motivates consumers to count the product further positively (Wernerfelt, 1988). With these contentions, the following hypothesis is proposed in this study:

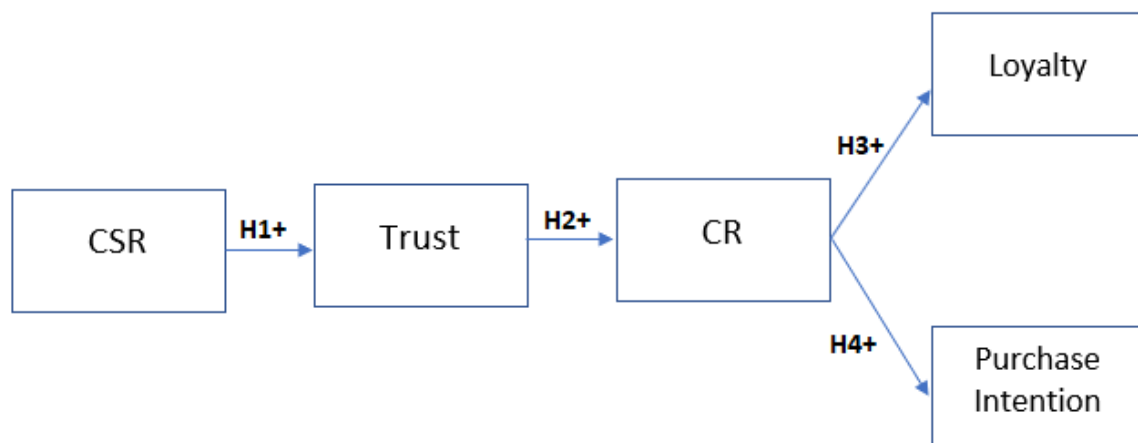
H3: CR is positively related to customer loyalty

Previous studies found that a company's reputation directly controls a company's intention to engage in a particular behaviour (Caruana et al., 2006). Further, corporate reputation is

associated with various beneficial outcomes, such as the desire to purchase tangible assets (Grewal et al., 1998) and intangible assets (Yoon et al., 2006) ) are ideal instances. Frequently, purchasers consider a company's credit before making a final purchase determination, affecting their online purchases, comprehended as trust issues (Caruana & Ewing, 2010). A general theoretical framework is linking CR and customer purchase intention. With these contentions, the following hypothesis is proposed in this study:

H4: CR is positively related to customers' purchase intention

**FIGURE 1:** Conceptual framework for research



### Study design and data collection

Those who live in Vietnam and have purchased Vingroup goods or used Vingroup services during the last six months are the research's core demographic. CSR concepts, on the other hand, are still new and unpopular in Vietnam. To respond to CSR-related issues, people must have a technical understanding of social responsibility and collaboration actions. As a result, the respondents for this study are well-educated clients who have at least a high school diploma. To evaluate each factor in the theoretical framework mentioned, the questionnaire was disseminated straight to respondents using an online site (i.e., survey on Google Form) and an offline infrastructure (i.e., questionnaire in the paper).

The convenience sampling method (also known as Haphazard Sampling or Accidental Sampling) was used in this study because of its low implementation cost and excellent availability of targeted people. The main goal of this method is to collect data from respondents who are readily accessible to the investigator (Etikan, 2016).

### Measurement scale

There were 374 surveys online and offline, and 311 people responded, yielding an 83 per cent response rate. Because of the high response rate, the risk of data collection bias has been reduced (Raheel & Naeem, 2013). The volume of data obtained meets both Schumacker and Lomax's (2010) sample size criterion (250-500 samples) and Chin's (2011) criterion of at least ten times the range of measures.



Many investigations are merged to generate the five dimensions given in the theoretical framework. This research concentrates on customers' perceptions of the firm's social actions to develop the CSR metric, which followed numerous prior types of literature. The replies were graded on four factors: the CSR association, consumers faith in the firm's actions (Berens, van Riel, & van Bruggen, 2005), and their understanding and endorsement of these activities (Du et al., 2007). In terms of trust, study examined the level of trust depending on customer' sentiments about the corporation via survey questions that were divided into two categories: faith in the firm's management in terms of policies and social behaviors (Sirdeshmukh, Singh, & Sabol, 2002) and belief in the firm's management in terms of financial performance (Sirdeshmukh, Singh, & Sabol, 2002). (Doney & Cannon, 1997). The CR was then measured using five factors derived from C. J. Fombrun et al. (2000) and Walsh and Beatty (2007) included acquaintance, the level of trustworthiness, economic, societal, and ecological accountability, and validity. Ultimately, the customers' future intentions are measured using seven and three elements collected from previous studies, correspondingly, to evaluate commitment and purchasing intention (Maignan, 2001; Sirdeshmukh et al., 2002; Sprotles & Kendall, 1986; Teng, 2009; Walsh & Beatty, 2007). The five stars "Likert scales" are thought to be a natural and objective approach to answering a topic, which is crucial in a social science investigation. In the Appendix., there was a measurement table.

## **RESULTS**

### **Exploratory factor analysis**

The study attempted to develop the instrument by discarding items with low adjusted item-to-total correlation values and implementing exploratory factor analysis to remove items that did not load on a factor adequately using the Principle Axis Factoring approach with eigenvalues greater than 1 and Varimax rotation of 25 proposed factors. The table indicates that no items should be eliminated because all elements with one-factor loading are more than 0.5. Additionally, no elements have a load value minus value greater than 0.3. As a result, deleting any items is pointless.

**TABLE 1.** Factor loading with Pattern Matrix

|      | Factor |      |      |      |      |
|------|--------|------|------|------|------|
|      | 1      | 2    | 3    | 4    | 5    |
| LY4  | .837   |      |      |      |      |
| LY3  | .822   |      |      |      |      |
| LY5  | .794   |      |      |      |      |
| LY2  | .783   |      |      |      |      |
| LY1  | .721   |      |      |      |      |
| LY7  | .661   |      |      |      |      |
| LY6  | .611   |      |      |      |      |
| TRU2 |        | .799 |      |      |      |
| TRU3 |        | .797 |      |      |      |
| TRU1 |        | .784 |      |      |      |
| TRU4 |        | .767 |      |      |      |
| TRU5 |        | .751 |      |      |      |
| CSR1 |        |      | .789 |      |      |
| CSR4 |        |      | .721 |      |      |
| CSR2 |        |      | .693 |      |      |
| CSR3 |        |      | .655 |      |      |
| CSR5 |        |      | .568 |      |      |
| CR2  |        |      |      | .695 |      |
| CR3  |        |      |      | .658 |      |
| CR1  |        |      |      | .649 |      |
| CR4  |        |      |      | .599 |      |
| CR5  |        |      |      | .552 |      |
| PI2  |        |      |      |      | .855 |
| PI3  |        |      |      |      | .805 |
| PI1  |        |      |      |      | .675 |

### Confirmatory factor analysis

Multivariate normality is a critical assumption in structural equation modeling (SEM) that must be validated (Hair, Anderson, Babin & Black, 2010). In terms of multivariate normality, a z-statistic of 9.208, which is less than 10, indicates that the sample is multivariate normal (Kline, 2015). As a result, the verified sampling of 311 data is ready to be analyzed subsequently.

Because the standard loading coefficient is more than 0.5, no item should be left out. Because all of the dimensions meet the EFA criteria, a measurement model based on corporate social responsibility, trust, corporate reputation, loyalty, and purchase intent is developed (see Figure 1). Table 2 shows that all variables had CR values greater than 0.7 and AVE values more than 0.5. (Hair et al., 2010). Moreover, all variable loadings of the variables have been demonstrated to be essential

above 0.5 for convergent reliability (Hair et al., 2010). MSV and ASV are both less discriminating than AVE in terms of discriminating validity (Hair et al., 2010). As a consequence, the measuring framework is shown to be in good agreement with the reported. Fornell-Larcker Criteria Analysis was used to double-check the validity. This study includes that each factor's square root of AVE is greater than all other square root AVEs all across the row and segment. The findings outperformed the test, indicating that the discriminant validity of these five components was confirmed. Additionally, there may be a requirement that all connections be less than one of the pair parameters. The discriminant validity of the questionnaire has also been established.

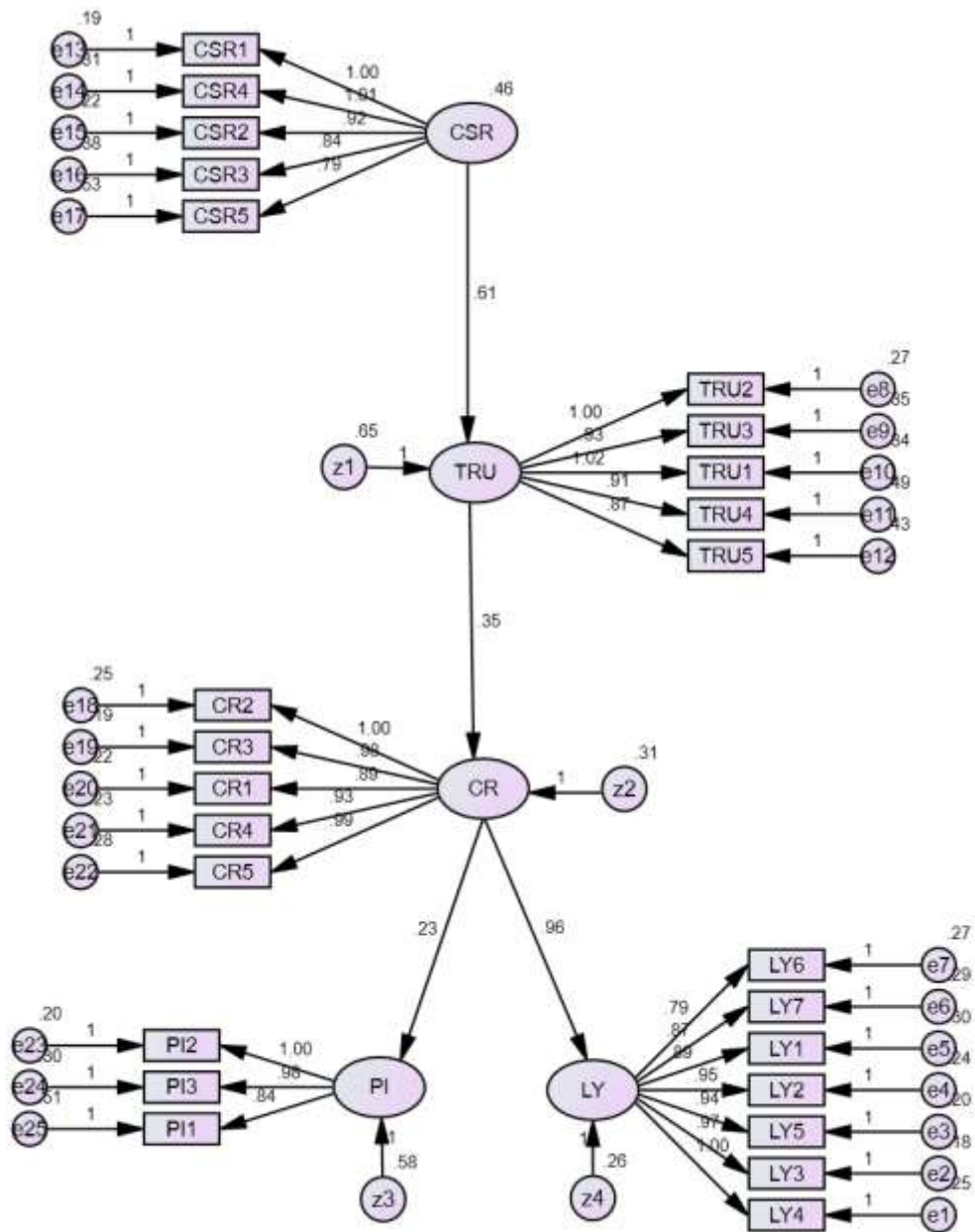
**TABLE 2.** Constructs' validity and reliability analysis

| <b>Variables</b>                       | <b>Composite reliability</b> | <b>Average variances extracted</b> | <b>Maximum Shared Variance</b> | <b>Average Shared Variance</b> |
|----------------------------------------|------------------------------|------------------------------------|--------------------------------|--------------------------------|
| <b>Corporate reputation</b>            | 0.890                        | 0.617                              | 0.585                          | 0.297                          |
| <b>Loyalty</b>                         | 0.938                        | 0.683                              | 0.585                          | 0.262                          |
| <b>Trust</b>                           | 0.908                        | 0.663                              | 0.207                          | 0.153                          |
| <b>Corporate social responsibility</b> | 0.858                        | 0.550                              | 0.356                          | 0.203                          |
| <b>Purchase intention</b>              | 0.829                        | 0.620                              | 0.038                          | 0.019                          |

### Structural Equation Modeling

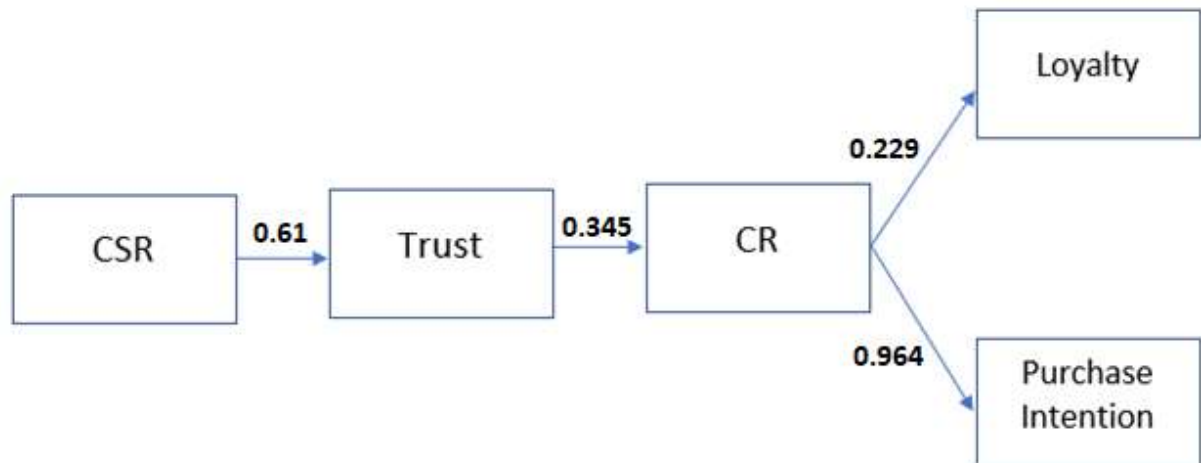
Then we did some hypothesis testing. Chi-square/df = 2.437 (3), which is regarded a good measure, CFI= 0.924 (>0.9), which is deemed a conventional measure, TLI= 0.916 (>0.9), which is considered a standard measure, and RMSEA= 0.068 (> 0.1), which is regarded a moderate measure. All of the indices have fulfilled the threshold levels, indicating that the structural model fits the data collected.

**FIGURE 2:** The final structural equation modelling results



All three correlations (corporate social responsibility and trust, trust and corporate reputation, and corporate reputation and purchasing intention) were statistically significant (  $p$ -value < 0.001), while others (company reputation and loyalty) was significant at  $p$  < 0.01. Furthermore, because every calculated weight was favorable, the findings showed that all of the relationships between components in the proposed model were positive. Furthermore, it is assumed that all four hypotheses were supported. Additionally, the association between business reputation and purchase intention was found to be the strongest, with the greatest estimate metrics (0.964) at a 95% confidence level. As a result, Figure 3 represents the final study model.

**FIGURE 3:** The final research model



## CONCLUSION AND DISCUSSION

The link between CSR and CR, with trust functioning as a mediating factor, was explored in this study, and the impacts of CSR on consumer behavior, such as loyalty and purchase intention, were discovered. Four hypotheses founded on the integrated model of CSR, trust, CR, loyalty, and purchase intention were established and examined using SEM to achieve the study's goal. In Vietnam, 311 qualified participants were used to examine their viewpoints, both offline and online. Finally, the results showed that the model has a considerable association. Three linkages (excluding CR and loyalty) and the mediators' function of trust that were proposed in the conceptual framework are validated with weights of 0.61, 0.345, 0.229, and 0.964. As a result, customers are affected by Vingroup's CSR initiatives, and they support the company's products since they perceive Vingroup as a socially responsible corporate.

### Practical Implications

According to the research, CSR is the first factor that influences a company's reputation as well as customer decision-making. As a result, these factors may be considered in Vingroup's specific suggestions.

For instance, CSR efforts are frequently used by consumers to assess a company's marketing performance. Vingroup executives must prioritize social duties in order to maintain customers' good perceptions of the corporate image as a reputable company. There are four categories of CSR efforts that organizations can use to improve their business reputation: Economic Responsibilities, Legal Responsibilities, Ethical Responsibilities, and Philanthropic Responsibilities (J. Park et al., 2014). Nevertheless, because the choice of CSR activities would influence consumers' social benevolence trust, which will have a favorable impact on the company's reputation, directors should identify CSR activities carefully, then execute and control them correctly and strategically. Vingroup has contributed VND 100 billion worth of medical equipment and equipment to test for the Sars-CoV-2 virus, which is seen as a significant contribution to the business brand.

Second, brand administrators should focus on a solid corporate social responsibility and enterprise image. It is indicated that brand managers would do better if they seek CSR im-

provements, which focuses on social and environmental issues, and use available forms of communication to highlight such CSR actions to indicate the organization. Vingroup's branding team should design yearly core charitable activities on significant events such as Tet Holiday to capture media and customer awareness. In this scenario, mainstream news is critical in conveying the company's brand image to consumers.

Finally, through CSR efforts, Vingroup should focus on strengthening its professional image. Philanthropic engagement is not only the quickest way to strengthen current loyal customers and to purchase intention, but it is also the most effective way to contact prospective customers. Nevertheless, the corporation should combine philanthropy with three other forms of CSR projects to carry out CSR wisely. As a result, the company's CSR strategy can be integrated with its corporate strategy, vision, and mission, ensuring its long-term viability.

### **Limitations and Further Research**

This research, like any other investigation, has some drawbacks.

Firstly, this study only looked at the effects of CSR on CR through a mediating component, consumer trust, even though earlier research has shown that CSR has a direct impact on CR (Maden et al., 2012; Maignan, 2001). Following that, this study looked at the repercussions that resulted from customer behaviors such as commitment and future purchase intentions, as well as probable outcomes from stakeholders like employees and investors (Maden et al., 2012). As a result, future research might establish a direct beneficial association between CSR and CR and recommend more achievable results from a stakeholder perspective rather than just from the perspective of customers.

Secondly, with data primarily derived from quantitative research employing the Likert scale, the critical challenge that the researcher would confront is lying replies in the survey questionnaire. The primary reason is that participants have a problem with recall, misinterpret the question, are restricted from giving replies in words, or suffer from "courtesy bias," which causes them to react according to what the investigator wants to believe (Mitchell, 1965). Moreover, despite the fact that the questionnaire was intended to be distributed both online and offline to approach people from various demographic backgrounds, the respondents appear to be primarily from Generation Z, ranging in age from 18 to 25, and based in Ho Chi Minh City, due to the author's social circle, which resulted in a lack of thorough responses from people of all ages and cultural background.

Lastly, the study's final weakness is that it relied solely on primary data, whereas it was applied to a Vingroup case study, which necessitated the use of secondary data such as business reports in order to get a thorough judgment (Church, 2002). In keeping with this viewpoint, future studies should make extensive use of both primary and secondary data in order to broaden vision and build a more integrative framework (Besson, Scharf & Kraut, 2006).

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## **APPENDIX**

### **1. Consumers' views on Vingroup's CSR initiatives**

**(Berens et al., 2005b; Du et al., 2007b)**

CSR1: Vingroup, in my perspective, is concerned about societal advancement.

CSR2: Vingroup, in my perspective, promotes worthy projects that benefit the community.

CSR3: Vingroup, in my perspective, operates responsibly in terms of community relations.

CSR4: Vingroup, in my perspective, is a responsible corporation.

CSR5: I am a strong supporter of all of Vingroup's CSR initiatives.

### **2. Consumer' strust in the Vingroup brand**

**(Sirdeshmukh et al., 2002b; Doney & Cannon, 1997)**

TRU1: I believe Vingroup is a trustworthy organization.

TRU2: I believe Vingroup is a trustworthy organization.

TRU3: I have confidence in Vingroup's products.

TRU4: I believe Vingroup is a trustworthy company.

TRU5: Vingroup may be trusted in general.

### **3. The reputation of Vingroup**

**(C. J. Fombrun et al., 2000b; Walsh & Beatty, 2007)**

CR1: I'm familiar with Vingroup's products.

CR2: Vingroup's goods have distinguishing features that set them apart from the competition.

CR3: Vingroup is a good firm.

CR4: Vingroup is a well-established brand in Vietnam.

CR5: Vingroup is a prominent company in overall.

### **4. Consumers' devotion to Vingroup's goods**

**(Sirdeshmukh et al., 2002b; Sprotles & Kendall, 1986; Walsh & Beatty, 2007)**

LY1: I enjoy talking to others about the Vingroup brand and its products.

LY2: I consider purchasing Vingroup's goods whenever I need them

LY3: When I use Vingroup's goods, I feel proud and at ease

LY4: I plan to stick with Vingroup's goods regardless of the fact that other firms may charge a decent price for a comparable product

LY5: I want to be a Vingroup consumer for a long term

LY6: I want to endorse Vingroup to my acquaintances, neighbors, and family members

LY7: Overall, I am loyal to Vingroup brand

**5. Consumers' intentions to consume Vingroup's goods  
(Maignan, 2001; Teng, 2009)**

PI1: I would like to buy Vingroup items above any other available brand.

PI2: I am prepared to promote Vingroup branded items to others.

PI3: I decide to purchase Vingroup items in the future.

# PSYCHOLOGICAL MOTIVATIONS OF GAME LIVE-STREAMING VIEWER ENGAGEMENT ON FACEBOOK

by

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## ABSTRACT

Few research efforts have been conducted to investigate the motives behind the engagement of live-streaming viewers in Vietnam, given the fact that peer to peer live-streaming is a rapidly growing form of media (Sjoblom & Hamari, 2017). This research explores why individuals on specific social media platforms (i.e. Facebook Gaming) devote their leisure time to watch others live-stream their game-playing sessions. Through questionnaire research, analyzed by multiple regression, viewers' search of information has been shown to be positively related to their spent hours on the live stream and streamers they prefer to follow on Facebook. Moreover, hours devoted to watching game live-stream are co-related with relief of tension, social integration, and affective motivations. The need to be socially integrated is also the leading indicator to predict viewers' subscription behaviors. This study lays the groundwork for understanding why people are drawn to this new form of media, such as online games and video streaming.

**KEY WORDS:** Psychological Motivations, Streaming, Uses and Gratification, Facebook, Structural Equation Modeling.

## INTRODUCTION

Various types of social media interactions, such as online communities, social media platforms, and blogs, have attracted the attention of Internet users in the last decade (Kaplan & Haenlein, 2010). As results of cutting-edge technology development, internet-mediated interactions have transformed beyond texts and pictures, enabling the possibilities of audio and video formats. Specifically, broadcasting channels is a particularly unique form of digitalized social interaction that has emerged on social media. Being the mixture of various internet platforms, live streaming (or broadcasting), enables individuals to stream their content of choices to the wider public audience as well as putting up dedicated channels for game live streaming (Twitch, Youtube Gaming, Facebook Gaming) to facilitate and enhance customers (in this case, "viewers") interactions (Hamilton, Garretson, & Kerne, 2014). A particular live streaming set of activities can consist of real-time audio and video broadcasts of a streamer in any topic and theme at their discretion. On-going conversations between users to users and streamers to users are also possible thanks to streaming platforms' built-in dialogs and chat boxes.

Video games have arguably had a certain degree of spectating and social interactions since their inception (Sjoblom & Hamari, 2017). From the gathering and cheering of people in the era of arcade games (Newman, 2004) to face-to-face interactions between players thanks to the introduction of LAN gatherings (Jansz & Martens, 2005). These aspects of social interactions between strangers when playing games have been eradicated since arcade gaming centers gave way to facilitated households fully equipped with gaming devices. Although video games have been the subject of research in multiple fields (Quandt et al., 2015), the recently emerged phenomenon of "game live streaming" has not received adequate research attention and efforts. Further academic insights into game live streaming would build up the body of knowledge in the domains of information sciences, communication, and media.

Game live streaming has amassed hundreds of millions of viewers dedicating their leisure time watching streamers play games on the Internet. Peer-to-peer game streaming has picked up the tremendous growing pace to become a novel media type of its own in recent years, rapidly increasing streamers' annual viewer bases by generating an estimated of more than 100 million unique viewers per month as of 2015 (Ewalt, 2014; Needleman, 2015; Twitch, 2015).

Unlike traditional online media content such as online videos, streaming is argued to be a much more complex and comprehensive form of hybrid entertainment, a highly interactive medium in itself that connects producers (streamers) and consumers (viewers) in real-time. On-going interactions between content creators and content viewers are made possible thanks to the live-broadcasting nature of streaming. There have been attempts to mimic streaming' social networking aspects from companies that offer traditional online content, such as Youtube (Boyd & Ellison, 2007; Lange, 2007). Nevertheless, by having real-time interactions, streaming platforms have been argued to be more advanced and transformative in terms of social networking aspects (Sjoblom & Hamari, 2017).

There have been attempts from companies to jump on the bandwagon of game streaming, given its rising success. A recent move was from Facebook, the social media behemoth, by launching "Facebook Gaming", which takes advantage of being built into its already massive social media platform, allowing the convenient and cohesive experiences of having a

streaming channel on top of the world's largest interactive social network. A form of a virtual currency called "Star Donation" is also introduced by Facebook Gaming, allowing streamers to monetize their streaming contents and viewers to exchange money to Stars to donate to streamers during streaming sessions.

The current void of knowledge, derived from the novel phenomenon of game streaming, warrants further research insights to explore the proposed questions: why are large groups of people psychologically motivated to consume live-streaming as a new form of entertainment; whether the growth of this novel media form tie into the broader trend of content consuming and consumers' information searching, or merely a newly emerged form of entertainment.

The core of live streaming is that it allows broadcasters and other consumers to engage and interact and provide a compelling viewing experience. This engagement in cyberspace can assist in the viewer's self-definition and subsequent identification with various references (Hall-Phillips, Park, Chung, Anaza, & Rathod, 2016). Between virtual communities, the psychological relationship of a social connection also serves as a powerful determinant of loyalty behavior (Badrinarayanan, Sierra, & Martin, 2015). As a result, explaining the research topic and including the identification definition within the current investigation may be beneficial.

The purpose of this study is, therefore, to evaluate and measure people's psychological motivations to watch people play games on the Internet (particularly on Facebook), relying on the phenomenon of game streaming which is one of the most influential forms of peer-to-peer media production and consumption.

## **LITERATURE AND HYPOTHESES**

### **Uses and gratifications theory**

The theory of "uses and gratification" (UGT) is arguably one of the most fundamental theoretical framework to explore the reasons why people consume different types of media within the fields of communication and media research (Katz, Blumler, & Gurevitch, 1974; Katz, Gurevitch, & Haas, 1973; Rubin, 2002; Ruggiero, 2000). Contrary to theories that adopt mass and generalized approaches when studying media, UGT provides an individualized and nuanced approach to analyzing media, thus allowing the potential of significant individual differences (Katz et al., 1974). Specifically, satisfaction/ gratification is what audience seek when consuming their media of choice (Katz et al., 1974; Ruggiero, 2000); audience is active consumers that seek out their preferred media products (Abercrombie & Longhurst, 2007; Baran & Davis, 2006; Wang, Fink, & Cai, 2008). It is also argued by UGT that media also competes with non-media products for consumers' gratification (Katz et al., 1973). Because UGT considers users as individual people instead of large groups, there has to be a lot of diversity (Katz et al., 1974). As illustrated in Table 2, UGT categorizes five types of needs (cognitive, affective, personal integrative, social integrative, and tension release) (Katz et al., 1973; West & Turner, 2010).



**TABLE 1.** UGT need types

| Need type            | Description                                              | Media examples                                                                                                                                 |
|----------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Affective            | Emotional, pleasant, or aesthetic experience             | Movies, television (sitcoms, soap operas)                                                                                                      |
| Cognitive            | Acquiring information, knowledge, comprehension          | Television (news), video (“How to Install Ceramic Tile”), movies (documentaries or films based on history e.g., <i>The Other Boleyn Girl</i> ) |
| Personal integrative | Enhancing credibility, confidence, and status            | Video (“Speaking With Conviction”)                                                                                                             |
| Social integrative   | Enhancing connections with family, friends, and so forth | Internet (e-mail, chat rooms, Listservs, IM)                                                                                                   |
| Tension release      | Escape and diversion                                     | Television, movies, video, radio, Internet                                                                                                     |

Source: West & Turner, 2010, p.398.

As media consumers are analyzed by UGT to practice conscious consumption, being aware of their media preferences and choices, accurate and tailored research insights are possible in studying media consumptions habit and motivations (West & Turner, 2010). In fact, there has been the adoption of UGT framework in various communication research scenarios: from television (Krcmar & Greene, 1999; Schmitt, Woolf, & Anderson, 2003), personal communication (Ishii, 2006), multitasking (Wang & Tchernev, 2012); to extensive application in online contexts (Ko, Cho, & Roberts, 2005; LaRose & Eastin, 2004; Mendelson & Papacharissi, 2010; Whiting & Williams, 2013) such as online games (Sherry, Lucas, Greenberg, & Lachlan, 2006; Wu, Wang, & Tsai, 2010), video streaming (Cha, 2014; Chiang & Hsiao, 2015) and Twitter (Chen, 2011; Johnson & Yang, 2009). Within the scope of our study, we aim to rely on the lens of UGT to reveal the psychological motivations of watching game live streams.

### **Live-streaming viewers’ motivations**

As game streaming is a recently emerged and yet to be studied medium, analyzing this phenomenon by UTG would not only provide new distinctive insights but also enable comparisons between game streaming and other traditional forms of media. Intuitively, it would be assumed that watching others playing games (through live streams) would not provide as much gratification as playing games oneself and having control over the events of the game. However, it has been revealed that watching others play brings in social dimensions and social gratification that are absent single-player experience (playing on one’s own) (Sjoblom & Hamari, 2017). The importance of social dimension has been re-examined in various game-streaming research (Hamilton et al., 2014). There are, however, a skew in-game streaming studies where much of the focus is on competitive gaming (eSports) (Hamari & Sjoblom, 2017). Although the pioneer studies (Cheung & Huang, 2011; Hamari & Sjoblom, 2017; Lee & Schoenstedt, 2011; Scholz, 2012; Weiss & Schiele,

2013) did reveal important motivators in watching game streaming, such as social and emotional interaction, learning-related (knowledge and information acquisition), leisure-related (escapism), none of them has managed to quantifiably measure relationships between viewers' satisfaction from watching game streaming and their usage of streaming services. Therefore, UGT as a theoretical guideline is used in this research to assess the connections between consumers' gratification and their media consumption.

Since previous studies have found the aspect of entertainment is of significant importance to media usage (Cheung & Huang, 2011; Hamilton et al., 2014; Hanson & Haridakis, 2008; Mendelson & Papacharissi, 2010), it is possible that the hours dedicated to watching game streaming is positively related with affective motivation. As it is also evident that viewers are more likely to have their effective motivation provided from a variety of different streamers, not just a single individual streamer, thus streamers watched, and streamers followed are also expected to positively-tied to levels of affective motivation. Subscription to a streamer, unlike the other three forms of usage, is expected to have more minor effects due to the fact that the cost for a viewer to choose to subscribe is unlikely to outweigh the pay-off in terms of affective motivation it can provide. As such, we propose that:

H1: Higher compelling motivation can potentially lead to an increased usage level.

Whether it is learning or information seeking, knowledge-related motivators have been shown by previous studies to be an integral motivator when using online media (Hamilton et al., 2014; Mendelson & Papacharissi, 2010; Whiting & Williams, 2013). As such, we expect cognitive motivation can positively impact the level of usage (H2). Specifically, "hours watched" is argued to increase in accordance with rising level of cognitive motivation. As the hours of watching increase, we propose that it will facilitate viewers' learning experience, which is crucial for cognitive motivation. The other three types of usage are also expected to be enhanced by an increased cognitive motivation.

H2: Increase in cognitive motivation is likely to impact the level of usage positively.

Hours watched and a number of streamers subscribed are predicted to be positively affected given the increase in the level of personal integrative motivation. For viewers to achieve a sense of personal integrative fulfilment, it is likely that an adequate amount of social interaction is required within game streaming sessions. For this reason, personal integrative motivation is expected to positively affect social aspects (e.g. streamers followed, streamers subscribed), leading to our third hypothesis (H3) that level of usage and personal integrative are positively co-related.

H3: Increased level of usage may be impacted by an increased level of personal integrative motivation.

Aligning with previous research where integrative social motivation has been argued to have a positive impact on the use of online media and services (Chen, 2011; Hamilton et al., 2014; Pai & Arnott, 2013; Scholz, 2012; Sherry et al., 2006; Whiting & Williams, 2013), we predict the same impact in the case of game streaming – where an increase in levels of integrative social motivation will result in a higher level of usage (H4). It is worth mentioning that the action of subscribing to favorite streamers indicate a heightened sense of social connections on many levels, such as the feeling of being "in the loop" (be-

longing to a community of fans). As a result, "subscription" – as it is significantly tied to various social aspects-is arguably one of the most likely to be impacted by an increase in motivation level (Oestreicher-Singer & Zalmanson, 2013).

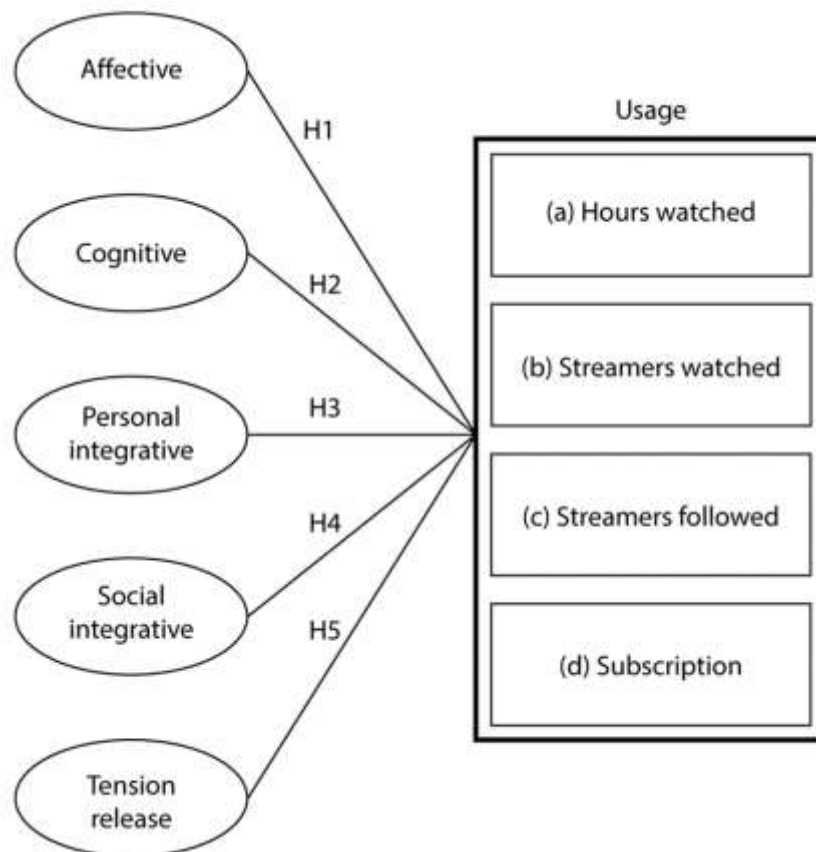
H4: Increased social integrative encouragement predicts an increased usage.

Releasing tension and seeking for a sense of escape (escapism as commonly referred to) is also mentioned in previous studies of online contexts (Courtois, Mechant, De Marez, & Verleye, 2009; Hanson & Haridakis, 2008; Mendelson & Papacharissi, 2010; Whiting & Williams, 2013). Tension release motivator is therefore hypothesized to positively affect the level of usage in terms of hours watch, streamers followed, and streamers watched (H5). We, however, anticipate a relatively insignificant relationship between tension release and subscription behavior , as tension release should not be the main motivator for the action of subscription.

H5: Increased motivation for tension release can lead to increased consumption (usage).

Figure 1 introduces the research model based on these five primary motivators and how they are related to the dependent variables of types of usage. The five primary constructs of motivators are presented as latent variables, whereas the four types of usage are grouped together for ease of visualization since they can belong to the general notion of "usage".

**FIGURE 1:** The proposed research model



## DATA AND METHODS

### Data

The study is aimed at people who have spent time on Facebook watching streamers play computer games. The questionnaire is mainly distributed through social media platforms such as Facebook and a few different gaming websites. A total of 198 eligible answers out of 238 online channel responses, comprising more than 83%.

Snowball sampling is a strategy of identifying opportunities in exchange for referring someone else. (1999, Vogt). Comfort sampling is a technique for gathering information from parts of the population who are both qualified and accessible (Saunders, Lewis, & Thornhill, 2012), and it has the advantages of accessibility and scope. The snowball sampling method and sampling convenience were utilized in the study. Due to the lack of population statistics, these two methodologies are regarded as the most acceptable.

### Measures

“Hours watched” refers to viewers’ devoted time to consume game streaming contents. “Streams followed” indicate how viewers can choose to follow certain streamers (or channels) in order to curate their feed to display their favourite streamers. “Streamers watched” measures the number of unique streamers viewed by an individual viewer per week. The fourth type of usage (subscription) that this paper investigates is choosing to pay monthly subscription fees to one of the multiple streamers in order to gain access to exclusive benefits (unique emoticons, visual badge of subscription, rights to take part in members-only events). In the case of Facebook Gaming, which is the focus of this paper, the subscription feature is recently introduced to enhance interaction between streamers and their dedicated followers/ fans.

To assess emotional motivations, we utilized Venkatesh (2000) and van der Heijden's perceived pleasure (2004, pp.695-704). Information from the Papacharissi and Rubin scale (2000), as well as a valuable item from the van der Heijden scale, have been used to build our game-strategy measurement (2004, pp. 695-704). These elements have been adjusted to fit the feel of a Facebook game live stream. In Hernandez, Montaner, Sese, and Urquizu, researchers used peer acknowledgement for integrative motivations (2011). In the context of socially integrative motivation, the scale created by Smock, Ellison, Lamp, and Wohn in 2011 and the Chavis, Lee, and Acosta (2008) threshold for reciprocal emotional attachment are employed. In connection to stress release, the measures of escapism and habitual pass-through periods introduced earlier by Smock et al. (2011) were utilized. The five rankings "Likert scales" are well-known as a straightforward and objective method of tackling a critical issue in social science. As a result, a Likert scale will be utilized to design the questionnaire in order to identify the perspective or viewpoint on five criteria regarding the level of approval: 1=Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree; 6=Strongly Agree. A table of measurement was attached in the *Appendix*.

## RESULTS

Initially, the significance level of the dependent variable (Hour observed) (sig 0,05) is influenced by four independent variables, namely affective, personal integrative, social integrative, and tension release. The final variable, cognitive, has a sig = 0.645 (> 0.05), which

is statistically insignificant and eliminated from the equation. The tension release (TR) component has the greatest impact on the factor (= 0.296) (hours observed), following by personal integrative (PI) (= 0.27), affective (AFF) (= 0.23), and social integration (SI) (= 0.168), according to the regressive outcome. As a result, the linear regressive equation is solved as follows:

$$\text{HOU} = 0.296 \times \text{TR} + 0.27 \times \text{PI} + 0.23 \times \text{AFF} + 0.168 \times \text{SI} + 0.161$$

Then there are three independent factors that have statistical significance in affecting the dependent variable (streamers watched) (significant level below 0.05). They include emotional, cognitive, and social factors. Personal integrative (sig = 0.166 (> 0.05)) and tension released (sig = 0.415 (>0.05)) are the remaining variables that do not fulfill statistical standards and will be removed from the analysis. The affective (AFF) factor has the largest influence (= 0.436) on the dependent variable (streamers viewed), followed by social integrative (SI) (= 0.316) and cognitive (COG) (= 0.277), according to the regressive results. As a result, the linear regressive equation is formed:

$$\text{STRWA} = 0.277 \times \text{COG} + 0.436 \times \text{AFF} + 0.316 \times \text{SI} - 0.531$$

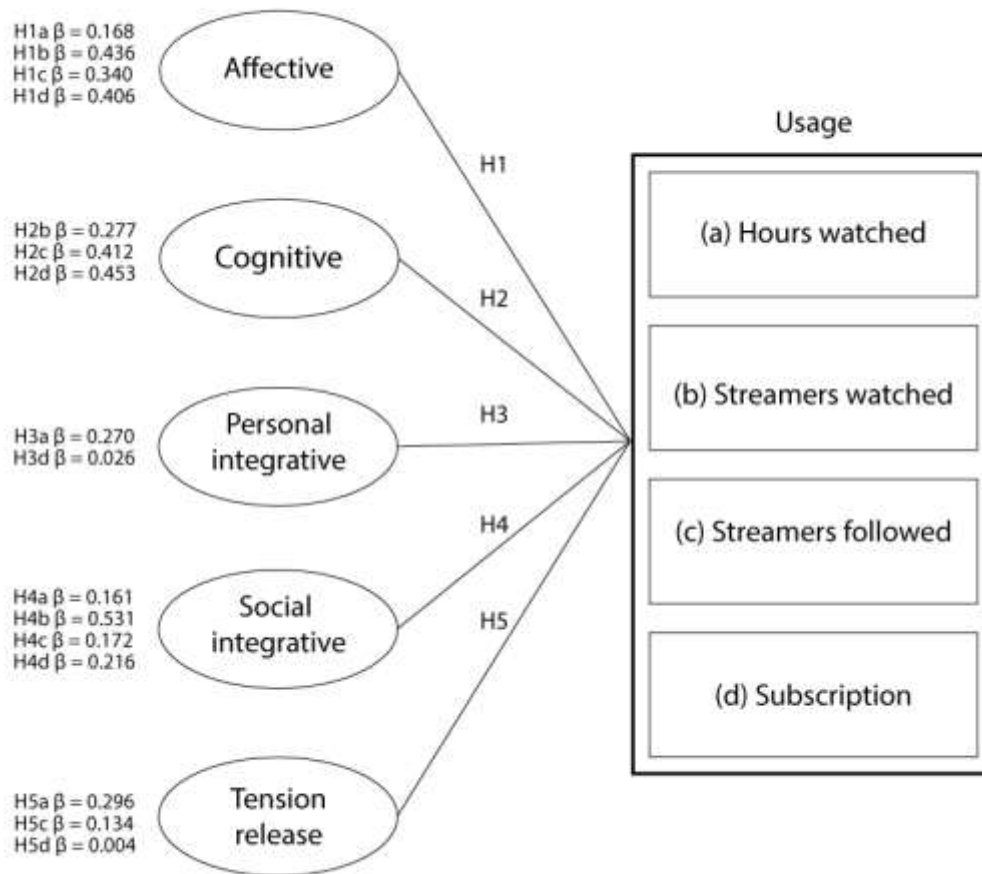
Furthermore, there are four independent factors that have statistical significance when it comes to the dependent variable (streamers followed) (significant value below 0.05). They are affective, cognitive, tension-relieving, and social-integrative characteristics. With sig = 0.856 (> 0.05), personal integrative is the only variable that does not fulfill statistical standards and will be removed from the analysis. According to the regressive findings, the cognitive factor (COG) has the strongest influence on this dependent variable (= 0.412) (streamers followed), preceded by affective (AFF) (= 0.340), social integrative (SI) (= 0.172), and tension relieved (TR) (= 0.134). As a result, the linear regressive equation is solved as follows:

$$\text{STRFL} = 0.412 \times \text{COG} + 0.340 \times \text{AFF} + 0.134 \times \text{TR} + 0.172 \times \text{SI} - 0.058$$

Ultimately, there are three independent factors that have statistical significance when it comes to the dependent variable (subscription) (significant value below 0.05), namely emotive, cognitive, and social integrative. Personal integrative (sig = 0.689 (> 0.05)) and tension released (sig = 0.071 (>0.05)) are the remaining variables that do not fulfill statistical standards and will be removed from the analysis. According to the regressive results, cognitive (COG) has the most considerable influence (=0.453) on the dependent variable (subscription), followed by cognitive (COG) (=0.406) and social integrative (SI) (= 0.216). As a result, the linear regressive equation is solved as follows:

$$\text{SUB} = 0.453 \times \text{COG} + 0.406 \times \text{AFF} + 0.216 \times \text{SI} - 0.441$$

**FIGURE 2:** The final regression result



## CONCLUSION AND DISCUSSION

This research aims to reveal the motivations for people to consume game streaming contents and to which extent these motivators would affect usage behavior (hours watched, streamers watched and followed, subscription tendency).

In general, results from data indicate that all five gratification factors (cognitive, affective, tension release, social and personal integrative) are significantly associated with hours devoted for game streaming consumption (hours watched) and the number of followed streamers (streamers followed). In a more nuanced revelation, each type of motivator seems to strongly affect different factor (i.e. tension release strongly affects hours watched, social integrative motivation strongly affects streamers watched, cognitive motivation strongly affects streamers followed and subscription tendency). Interestingly, social integrative's impact is not the strongest among the motivators, yet its presence is noticeable in every outcome variables, suggesting that social integrative is one of the notable motivators in social network contexts.

## Practical Implications

From the findings of this paper, it has been revealed that spectating experiences in gaming (watching others play) is arguably provide significant gratification/ satisfaction to consumers, challenging the traditional views that sole playing experiences are the most important aspect in designing games. Game developers and game producing companies should take into account spectating elements when creating games as media creators are shifting to gaming contents as a new and rising communicating medium, both on live-stream platforms (e.g. Facebook Gaming, Twitch) and video-on-demand platforms (e.g. Youtube). The rapid development of gaming contents on these mentioned platforms suggests that industrial and mass-produced contents are giving way to peer-to-peer and user-generated contents, thus shifting the paradigm of gaming media in particular and changing the media framework in general. Incorporating communicative and spectating aspects in game design is increasingly to be impactful besides playing experiences. In fact, streaming has already been showing to be a significant sales booster in the gaming market, taking spectatorship elements into account is also more likely to leverage game companies' competitive advantages (Sjoblom & Hamari, 2016).

Although it is noted from this study's results that personal integrative is not a significant but rather minor factor in impacting the number of streamers watched and followed, surveyed people did reveal in their answers that personal integrative satisfaction is present when consuming streaming contents. A plausible explanation for this seeming paradox from the results and respondent's answers is that viewers do not actively seek out cognitive satisfaction as their main reason to watch streaming contents but receive these cognitive gratification as a by-product from their stream consumption. Other forms of media like Youtube videos are more likely to fulfill viewers' cognitive needs such as seeking information to play games, due to the fact that these forms of media can be adjusted at viewers' discretion (e.g. pause, rewind, rewatch multiple times). Incorporating viewers' ability to adjust the live streams real-time media; thus, live streams can be challenging, thus it is suggested that streaming services take a different approach and embrace their real-time nature by further enhancing the communications between streamers and viewers with new technologies. Better communication would allow streaming sessions to be more educative and in information, thus better in fulfilling viewers' cognitive needs. Another worth considering strategy is spearheading educative streams where the environment is similar to tutorials/ workshops, and the relationship between streamers-viewers is similar to guiders-students.

Perhaps one of the most notable results from this study is that social factors' impacts are present in every outcome variable, suggesting that social factors are at the core and heart of viewers' streaming experiences. It can be argued that belonging sense and communality impel a variety of their usage intentions and behaviors: numbers of hours watched, following and subscribing to streamers to further enhance this sense of community (or "fanbase" commonly referred to). Therefore, it would be sensible for streamers and streaming platforms to enhance social factors such as sense of viewer communities to profit from these social gratifications from consumers. It is evident that the current tools that facilitate these social aspects in game streaming are inadequate and lackluster, given that viewers can only use chatbox during streams and have to follow streamers other social media platforms (e.g. Facebook, Instagram, Twitter) to maintain a sense of fan communities and fan dedication. It is therefore suggested for streaming platfointegratether intergrate better tools and technologies within streaming platforms to satisfy viewers' needs of social interactions – one of the core aspects of stream consumption.

However, it should also be noted that as streaming channels grow in size and amass immense number of viewers, the effects of social communities can in fact hinder other forms of viewers' satisfaction, such as personal integrative and recognition since there are more communication noises from multiple viewers as well as lesser sense of being recognized by streamers. As it is pointed out by Chiang and Hsiao (2015), it is worth considering for streaming platforms that cementing reputation of platforms and having personalized suggestions algorithm tend to sustain viewers' usage of video-based platforms (such as Youtube).

### **Limitations and Further Research**

While this study makes a substantial contribution, it does have several flaws that should be acknowledged.

The first flaw is the study's convenient sampling, which is essentially its fundamental flaw. Because this was an online survey, the sample mainly was collected through internet networks. Although the online survey is well-suited to the study's topic, which is watching live streaming on social media, the sample size is small and ready to respond. Some persons do not have access to the Internet and hence will be unable to complete online questionnaires. Creating probability samples from e-mail addresses is similarly tricky.

The second disadvantage is the distinctiveness of Facebook Gaming; it was only released a few months ago, so there has not been much coverage in the press or study studies. Therefore, finding accurate statistics from a trustworthy and legitimate source is challenging.

This study's topic offers a variety of avenues for further investigation. The forms of dynamics employed in UG research are studied in this study, but factors must still be evaluated to acquire understanding into video game production. It might be useful to compare motivation levels across demographic characteristics such as gender, home country, education, and income. It is also a good idea to look into the differences in service habits between men and women. For instance, determining the game categories that a player prefers using special rewards. Many forms of games are becoming more competitive as a result of the increased competition, while others are giving more training for free. We believe that this affects not only the gameplay but also the watching enjoyment.

Subscriptions are a sort of paid membership, so they are an essential factor of the consumption process; nevertheless, this study could not generate the desired high degree of anticipation, which would have motivated registration. As a result, it is fascinating to investigate the many types of subscription activity motivations.

Furthermore, personal integrative motivation does not appear to have many good elements in this research. As a result, this will be one of the most interesting subjects in the future, as it will be helpful to define different components of personal integrative motivation using more than one scale. As a result, the most accurate results regarding the effect of this characteristic on streaming viewing are provided.

Furthermore, while social motivation does not have a great impact on anyone aspect, it does have some effect on each. As a result, future studies should focus on social motivation rather than psychology to investigate if specific aspects like amusement, socializing,



social connections, social support have such an impact on seeing other individuals playing games on Facebook Gaming users' connections.

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# APPENDIX (1)

| Variable             | Item                                    | Item                                                                                               | Scale origin               |
|----------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------|
| Affective            | Enjoyment                               | I think it is indeed entertaining to play games on Facebook.                                       | Venkatesh, 2000            |
|                      |                                         | It is indeed fun to play games on Facebook.                                                        |                            |
|                      |                                         | It is indeed entertaining to play games on Facebook.                                               |                            |
| Cognitive            | Information seeking about game products | With Facebook Gaming, I can quickly choose the game I wish to play.                                | van der Heijden, 2004      |
|                      |                                         | Through Facebook Gaming, I'm more aware of the new games I'm considering playing.                  |                            |
|                      |                                         | With Facebook Gaming, I am able to play games that I would not otherwise be able to play.          |                            |
|                      | Learning about game strategies          | By watching Facebook Gaming, I'm better informed about new game strategies.                        | Papacharissi & Rubin, 2000 |
|                      |                                         | I'm learning how to play games through watching Facebook Gaming.                                   |                            |
|                      |                                         | I learn about game tricks from watching Facebook Gaming.                                           |                            |
| Personal integrative | Recognition                             | Other Facebook Gaming users should take my remarks into consideration.                             | Hernandez et al., 2011     |
|                      |                                         | I'm delighted I'm aware of the game, as my comments demonstrate to other Facebook gamers.          |                            |
|                      |                                         | I make an effort to increase the trustworthiness of my comments among other Facebook Gaming users. |                            |
|                      |                                         | When I play Facebook Gaming, I prefer to consider my feedback.                                     |                            |
|                      |                                         | It's time to start using Facebook Gaming, especially when I'm bored.                               |                            |
|                      |                                         | It's time to start using Facebook Gaming, especially when I need something to do with my time.     |                            |

## APPENDIX (2)

| Variable        | Item        | Item                                                                                           | Scale origin       |
|-----------------|-------------|------------------------------------------------------------------------------------------------|--------------------|
| Tension release | Escape      | By using Facebook Gaming, I may forget about school, work, and other obligations.              | Smock et al., 2011 |
|                 |             | I can use Facebook Gaming to hide from the rest of my family or others.                        |                    |
|                 |             | With Facebook Gaming, I can get away from what I'm doing.                                      |                    |
|                 | Distraction | When I don't have anything else to do, I play Facebook games.                                  | Smock et al., 2011 |
|                 |             | It's time to start using Facebook Gaming, especially when I need something to do with my time. |                    |

**EFFECTIVENESS OF CELEBRITY ENDORSEMENT ADVERTISEMENTS  
ON CONSUMER PURCHASE FOR EXISTING PRODUCTS:  
THE CASE OF TOYOTA VIOS IN VIET NAM**

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**ABSTRACT**

This study investigated the effectiveness of brand promotion using celebrity endorsement by three features, namely, celebrity (i.e. credibility, attractiveness, product - image match), personal (i.e. self - satisfaction and expression power), and social (i.e. peer influence) on consumer purchasing behavior (i.e. imitation behavior and purchase intention). Based on existing literature on brand promotion, we develop a research model integrating three characteristics of celebrity endorsement, consumer loyalty and consumers' purchase intention into the case of Toyota Vios in Viet Nam. Using a sample of 306 respondents, our study applied structural equation modelling to confirm seven hypotheses. The results showed that all three factors of celebrity endorsement, including celebrity characteristics, personal characteristics and social characteristics, strongly influence consumers' intention to purchase through imitation behavior as a mediator. Therefore, marketing managers must choose testimonials with a high level of influence, especially in the field of cars, high credibility within the community and appreciated by customers, and develop campaign focused on the need for expressing power.

**KEY WORDS:** Celebrity Endorsement, Celebrity Characteristics,  
Personal Characteristics, Social Characteristics,  
Purchasing Intention; Imitation Behaviors



## INTRODUCTION

One of the most crucial factors that a firm must acknowledge is recognizing prospective consumers and selecting the right communications platform for a product or service (Armstrong, 2009). There are various ways to engage with the brand, but celebrity endorsement is the most well-known (Friedman, Termini and Washington, 1976).

Among the entertainment industry in Vietnam, several advertisements with young artists as key opinion leaders (e.g. Suboi, Issac, Khoi My, Vu Cat Tuong, Duc Phuc, Erik) started to thrive in 2015 (Van, 2017). Celebrities are invited to represent the corporate brand with various product segments, namely food, cosmetics, smartphones and cars. According to McCracken (1989), the performer is known to gain the viewer's attention while maintaining a friendly attitude toward several products, contributing to impersonation and consumer buying intention, using a dynamic image, attractiveness, relevance of celebrities and brands, certain fan bases, and awareness campaigns.

Therefore, like many other manufacturers, Toyota Vios - a mid-range car brand- also chooses celebrity endorsement as a branding strategy to promote the brand. Entering the Vietnam market in 2003, Toyota Vios has soon become a famous brand name among consumers and selected by many customers in the race to win market share.

Indeed, when evaluated the perspective of economic benefits, celebrity branding causes customers to pay attention to the product while also providing possibilities to promote the brand, improve awareness, generate income, and grow the customer base (Menon, Boone and Rogers, 2001; Lafferty and Goldsmith, 1999). In particular, Toyota Vios created its branding campaign to boost customers' impression and increase brand recognition when they launched a new generation of breakthrough cars with Slogan "No Quality - No Life" in 2018. The firm released the short movie "Value-added service chain" on the Toyota Vios, which features the main character, rapper Suboi, who then become the brand ambassador of Toyota in Vietnam on every mass media. Suboi is favored by a series of international newspapers named "Queen of Vietnam hip-hop music" and known as the rapper for U.S. President Obama, which comes to immediate international media attention. Suboi beat off over 15,000 other applicants to be one of the musicians performing at the world's largest music festival, SXSW (South by Southwest) in the United States, in March 2015. Suboi is involved in many promotion campaigns of global brands with ambassador status. As Suboi's work is always well-received by her loyal fans and other prestigious critics, Toyota Vios chose Suboi as a brand representative for an intelligent strategy.

Marketers, as well as celebrities, are under pressure to maintain consumers' attractiveness and attention. Utilizing traditional marketing channels such as distributing leaflets or mailing, celebrity endorsement may lead to customers' dissatisfaction (Dima, Teodorescu and Gifu, 2014). Celebrities must use digital communication channels such as social media to attract, connect, and directly with customers in order to overcome this dilemma (Dima, Teodorescu and Gifu, 2014). Furthermore, past researchers have found that celebrity endorsement's impact on customer purchase depends on celebrity attributes such as attractiveness, experience, and trustworthiness (Gupta and Kishore 2015). Although many papers are examining the effectiveness of celebrity endorsement (Awasthi & Choraria, 2015; Choi & Rifon, 2012; Kutthakaphan & Chokesamritpol, 2013; Löfgren & Li, 2010), there is indeed little report that integrates the effect of a celebrity endorsement on customer's purchasing considering core attributes of celebrities, social characteristics and personal

characteristics. Hence, this paper applied the case of Toyota Vios with Suboi as the key representative to fill this research gap.

## **LITERATURE AND HYPOTHESES**

Scholars have utilized different theories to analyze the influence of endorses celebrities on consumer purchasing behavior, such as Meaning transfer theory (McCracken, 1989), Cognitive perspective theory (Eysenck, 1992), Social Learning Theory (Bandura, 1978) and Diffusion of Innovation Theory (Rogers, 2010). According to Lee and Thorson (2008), celebrities are persons who are well-known and have the ability to influence others in society. Celebrities also have distinguishing characteristics such as attractiveness, opulence, and unusual abilities (Amos, Holmes and Strutton, 2008). Celebrities are well-known and frequently appear at public events, media, magazines, fashion shows, and ads (Eisend and Langner, 2010). Celebrity endorsement of a company's product is becoming increasingly popular, resulting in quick brand recognition (Till and Busler, 1998).

Goldenberg's (2003) regulation of vision, consciousness, expression, memory and behavior is involved in imitation as a learning mechanism. Evaluating what someone learns and duplicating it are two different types of tasks in this strategy. The importance of the moment or position when imitation is performed, the numerous qualities of the circumstance being imitated, the status of the individual taking action, and the social experience were all addressed by Nehaniv et al. in 2002. Imitation is an excellent way to learn new functionality by expanding on what others have done before (Borenstein & Ruppin, 2005). This is a good source for information from the instructor to the viewers by using a specific setting (Hoffman et al., 2006). As a result, buyers should replicate celebrity behavior for the reasons stated in the provided article. Celebrities' actions will have an impact on perception, which could lead to better understanding. It may also assist customers who are looking for meaning or attention.

### **Customer behavior and imitation**

The extent that a person believes a source with proper qualifications, competence, or experience is reliable, is referred as celebrity credibility (Self, 2014). Two important reputational characteristics are expertise and credibility. The cognitive capacity of a celebrity to render a simple application is referred to as competence (Khalid, Siddiqui, & Ahmed, 2018). The ability of people to judge the goods and the trustworthiness of celebrities are both critical factors in the acceptability of advertisements. To be regarded as persuasive, a source must be reliable and ethical (Schramm, 1954). Specialists and right channels, in fact, become more trustworthy and dominating on beliefs, beliefs, and behaviors as a result of a process of internalization. Customers appreciate celebrity perspectives, which results in a circle of localization. The idea-collection should then be included in the customer network system and maintained indefinitely. When public opinion is pessimistic about a product or brand, a reliable source is essential (Belch and Belch, 2003).

H1: Customer imitation behavior is influenced by the credibility of celebrity characteristics.

A characteristic of how the picture of the endorsement complements the goods the celebrity is advertising is characterized as the persuasion of a celebrity endorsement, known as product and image match (Homer and Kahle, 1988). The relevancy of celebrities and

products is viewed as a critical aspect in determining the celebrity endorsement impact (Nhung, Sarinya and Claire, 2011). Prior research has found that the physical attractiveness effect is reciprocal and that celebrity endorsing is more effective than unappealing desirable spokesperson objects (such as perfumes, cosmetics, and hair care products) (Choi and Rifon, 2012). On the other hand, realistic, technology-related items may not have the same effect due to the insignificance of commodity style appeal (Till and Busler, 2000). As a result, the brand's degree of credibility and efficacy is of the utmost importance to the celebrity's public image and the corporation (Kamins and Gupta, 1994; Roth and Romeo, 1992).

H2: Customers' imitation behavior is influenced by the attractiveness of celebrity characteristics.

The celebrity attraction is received depending on the celebrity's distinctiveness, talent, and familiarity. The celebrity's awareness by contact is the link between the community and the celebrity, as well as the desire to be intimate with the celebrity's behavior and existence through empathy (Jones and Schumann, 2000). When the target demographic is identified with celebrities, they are more likely to absorb their attitudes, beliefs, habits, and viewpoints. When a celebrity's attraction is supposed to be passed on to a business after having a celebrity's sense of stability, this is stated to happen. While some celebrities draw attention to advertisements, they do not do so for items or businesses. Although a handsome celebrity is thought to improve brand recognition, it has little effect on message retrieval. Advertisers must make sure that their messaging grab consumers' interest (Reid & Soley, 1983).

H3: Customer imitation behavior is influenced by product – image match of Celebrity Characteristics.

According to Baldry and Farrington in 2000, personal traits are attributes that are unique to one individual and may or may not be shared by others in the same group. Such qualities comprise how an individual (i.e., a consumer) develops specific behaviors and tastes, as well as a customer's perception and decision to purchase a commodity. Popular image, celebrity, and spectator influence decisions when evaluating specific concerns (Koustelios, 2001). Consumers want products that meet their most fundamental requirements and desires.

Customers are thrilled with the pictures of prominent celebrities being passed by when purchasing goods or services, as well as the consideration they receive (Awasthi and Chorraria, 2015). As interested parties, procedures and organizations, according to Baumeister in 1991, are less critical than self. The way someone sees himself could be interpreted in two ways. It is the individual who is in charge of forming definitions in the first variation. The organization, in particular, performs the task of developing a coherent structure by combining various cultural materials and attempting to conform human components to cultural aspects (Theodorakis et al., 1996). As a result, the primary goal is to connect one's emotional impact with empirical cultural aspects. According to academic studies, the belief that people should imitate the behavior of celebrities in order to please them becomes easier to obey and accept by others (Awasthi and Chorraria, 2015). The degree of mimicking that the behavior performs is assessed using self-satisfaction.

H4: Customer imitation behavior is influenced by self-satisfaction of Personal Characteristics.

A tendency in which a person seems to be influenced by a peer's manner of life and thought is referred to as peer influence (Oak, 2009). It helps to create an environment in which people have the right mindset. Understanding the link between each other's feelings, perspectives, and needs are necessary for effective peer mediation (Stafford, 2004). Awareness of the relationship between emotions, behavior, and needs is necessary for effective social influence (Stafford, 2004). People who are more socially oriented have a proclivity to agree with others' desires and accept and gain others. The standard influence is the first, and the impact of knowledge is the second. This also implies that the guy wishes to improve his looks through asset literature (Bearden, Netemeyer & Teel, 1989). For instance, when a client strongly influenced by the group is impressed consciously, their behaviors (i.e., celebrity) may affect customers directly or indirectly through celebrity acts.

H5: Customers' imitation behavior is influenced by the peer influence of Social Characteristics

Power is described as an asymmetry (e.g., asymmetry in understanding or reliance) in personal relations (Simon, 1994; Nelson and Aboud, 1985; Molm, 1991). Asymmetry in relationships is frequently caused by the ability to own riches, such as the ability to challenge or manage an immutable asset like images or information (Smith and Parker, 1976; Noë, Van Schaik, and van Hooff, 1991). Any information or expertise can be obtained and projected in order to manifest a superior force and surrounding resources. Furthermore, power involves both supremacy and persuasion, while supremacy is defined as strength-dependent or force-threatening (de Waal, 1989). As a result, customers frequently replicate celebrity behavior in order to demonstrate their authority; this element is known as an expression of power.

Customer behavior is heavily influenced by social factors. Someone in the growing person's life has an impact on their purchasing decision. Neighborhood, family, status, and comparison level are all critical social factors (Perreault, 2014). Each customer is an individual, yet they are also a part of a group. The membership group is the group to which the customer belongs (Perreault, 2014).

H6: Customers' imitation behavior is influenced by the expression of power of Personal Characteristics.

### **Imitation and purchase intention**

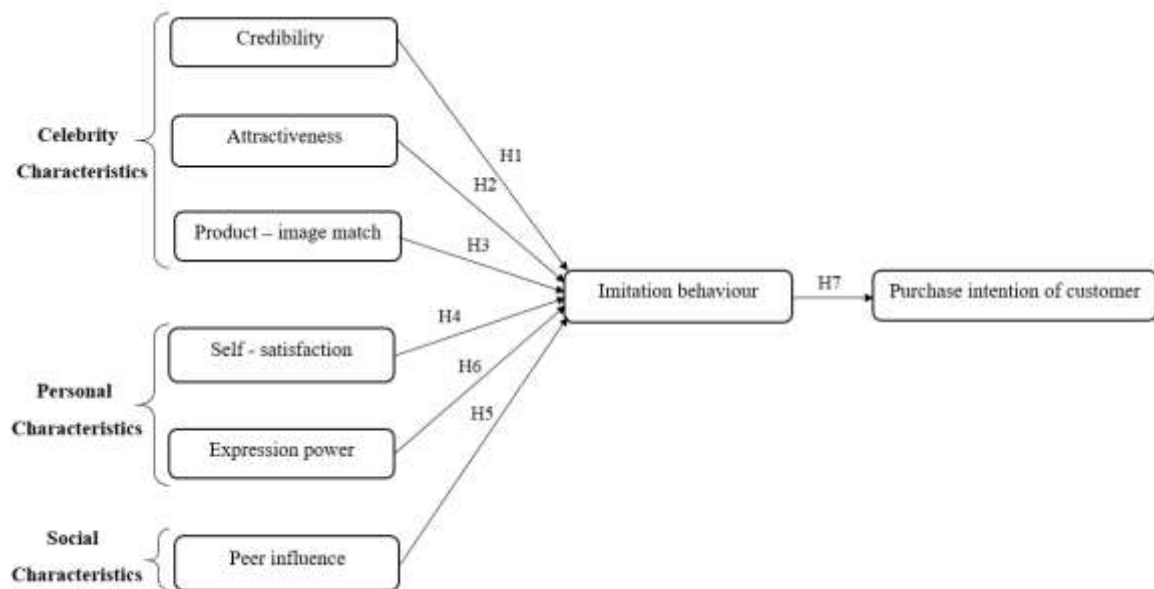
When it comes to purchasing a brand or commodities, the consumer makes the final decision (Alam and Sayuti, 2011). A buyer's motivation is influenced by several elements, including the buyer's willingness to make a transaction, possible spending aspirations, and a repurchase decision (Joshi and Rahman, 2015). In addition, the decision-making cycle for buying and repurchase intention such goods from clients includes a number of processes. The five systems that make up the customer decision-making process are accreditation, quest information, alternative assessment, and purchase decisions (Belch & Belch, 2003; Kotler et al., 1990). As a result, the consumer must go through all stages before agreeing to purchase a specific product.

The reason for a consumer's purchase is tied to his or her tendency to buy a particular brand or product (Belch & Belch, 2004). The possibility of a person acquiring a thing is also indicated by the intention to purchase (Phelps & Hoy, 1996). Imitation is a system of

ethics based on soft logic principles, in which people choose an acceptable behavior based on earlier payments (Huck and Oechssler, 2008). Many pieces of research have shown that customer imitation of brands has a considerable influence on purchasing purpose (Mitchell & Olson, 1981; Gresham & Shimp, 1985; Batra & Ray, 1986; Phelps & Hoy, 1996).

H7: Customer imitative behavior has an impact on purchase intent.

**FIGURE 1:** The proposed research model



## DATA AND METHODS

### Data

The questionnaire was aimed at people of various ages and backgrounds who were considering buying a Toyota Vios. A network medium is used to conduct surveys (i.e., a Google form questionnaire to check the hypotheses suggested above). The majority of online surveys are conducted via email and personal interactions. A total of 306 individuals were chosen from both online and offline channels for this study. Initially, 349 response forms were collected; however some were deemed ineligible since many of the required statements were left blank, some respondents misinterpreted the scale in a reversed manner, and some respondents picked one answer for more than 90% of the questionnaire. Consequently, the qualified sample accounted for 87 percent, which fits Schumacker and Lomax's criteria (2004).

For data gathering, this article used snowball sampling and convenience sampling methods. Snowball sampling is a methodology that involves first locating possible respondents, who then react to someone else (Miller, 2003). This strategy would make use of the social networking benefit to broaden and expand the response pool (Thompson, 1997). Convenience sampling is a means of collecting data from easily accessible and valuable members of the community (Saunders, 2011) who have an edge in terms of access and achievement. Convenient sampling is a quick and easy way of collecting data from community members that have the advantage of being readily available and accessible (Saunders, Lewis and Thornhill, 2012).

## Variables and measures

The model in this article has eight variables, and different scientists vary each measuring element by many factors to improve the material's accuracy. First, Awasthi and Choraria (2015) employed three criteria to assess the attraction of celebrity endorsers, as per the research. Second, four criteria are utilized to assess the trustworthiness of celebrity endorsers (Awasthi and Choraria, 2015). Third, three components from Kutthakaphan and Chokesamritpol (2013), Lfgren and Li (2010), and Choi and Rifon (2013) are used to assess the match between celebrity and product image (2012). Another three elements are drawn from Awasthi and Choraria's (2015) study on using peer influence to evaluate. Fifth, three metrics adapted from Awasthi and Choraria (2015) to evaluate the expression of influence. Sixth, there are three items used to measure self – satisfaction, according to Awasthi and Choraria (2015). Seventh, five metrics from Awasthi and Choraria (2015) were also used to measure imitation behavior. Finally, the three elements evaluating consumers; purchasing intention are utilized according to Awasthi and Choraria (2015).

The five "Likert scales" rating provides a straightforward and unbiased method of assessing the subject, which is critical in social science research. As a result, this strategy is used to design this study questionnaire, which uses a scoring system to classify the perception or assessment of five variables. In the Appendix, there was a measurement table.

## RESULTS

The SEM model depicted in Figure 2 was used to test hypotheses. The GOF (goodness-of-fit) indices have demonstrated that the measurement framework fits the dataset appropriately, with a good metric of chi-square and degree of freedom [2/d.f.] equaling 1.896 and a reasonable metric of [RMSEA] equaling 0.054. (Hair Jr et al., 2014; Ho, 2006). Because the lower the RMR level, the better, 0.113 reveals a good fit (Ho, 2006). Furthermore, the Tucker-Lewis Index indicator is 0.925, which is deemed a conventional fit, indicating that the structural model fits the data well.

Generally, our model received positive feedback. P-values with a value less than 0.5 are said to be particularly significant. Furthermore, with the exception of imitation behavior and self-satisfaction and imitation behavior and image match, all associations were 99 percent of the significance level (significance level of 95 percent). All of the relationships among factors in the suggested framework (hypotheses) are favorable, particularly since all of the calculated weights are favorable. All seven hypotheses were shown to be true in general. Moreover, at a significance level of 0.01, the association between intimate behavior and purchasing intention proved to be the highest, with the maximum weight of 0.33. Taken altogether, the results have shown that the research model allows understanding of how celebrity, personal and social characteristics purchase intention through imitation behavior as a mediator. First, this study found that all three characteristics of celebrity (credibility, product – image match, attractiveness), personal (self – satisfaction, expression of power) and social (peer influence) affect imitation behavior moderately. Second, the correlation between imitation behavior and purchase intention was proved to be very strong.

**FIGURE 2:** The final structural equation modelling results

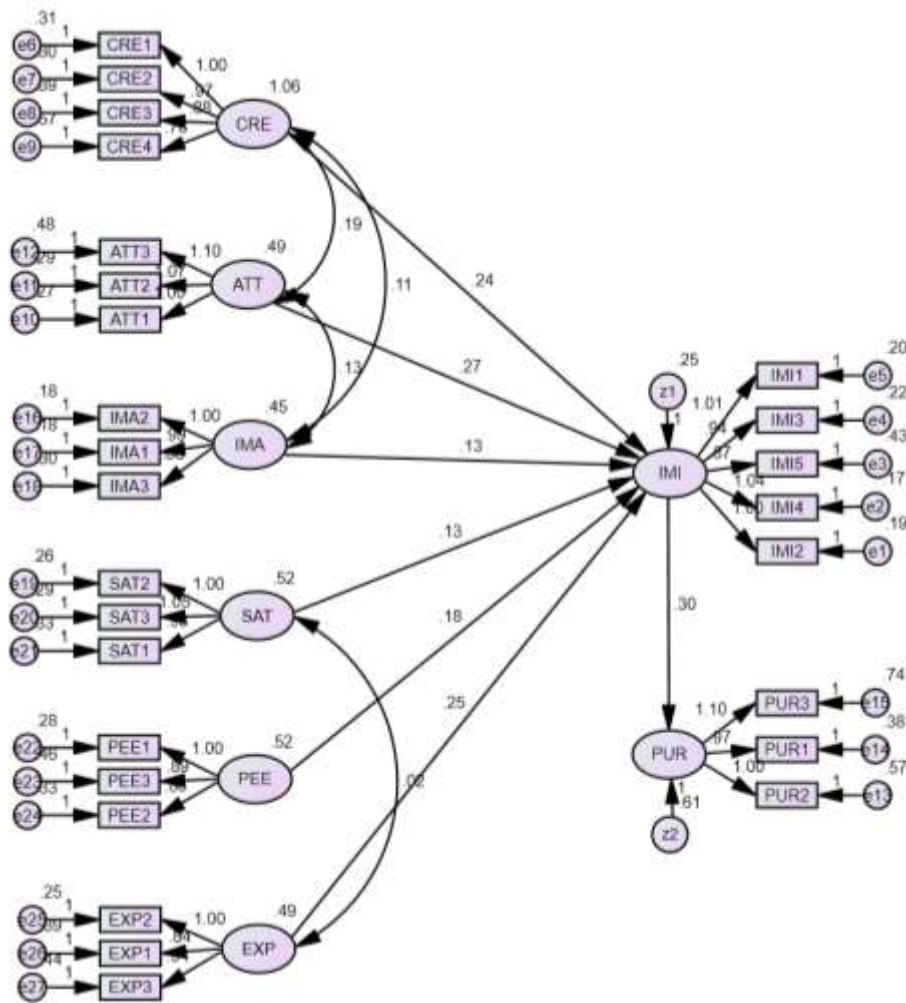
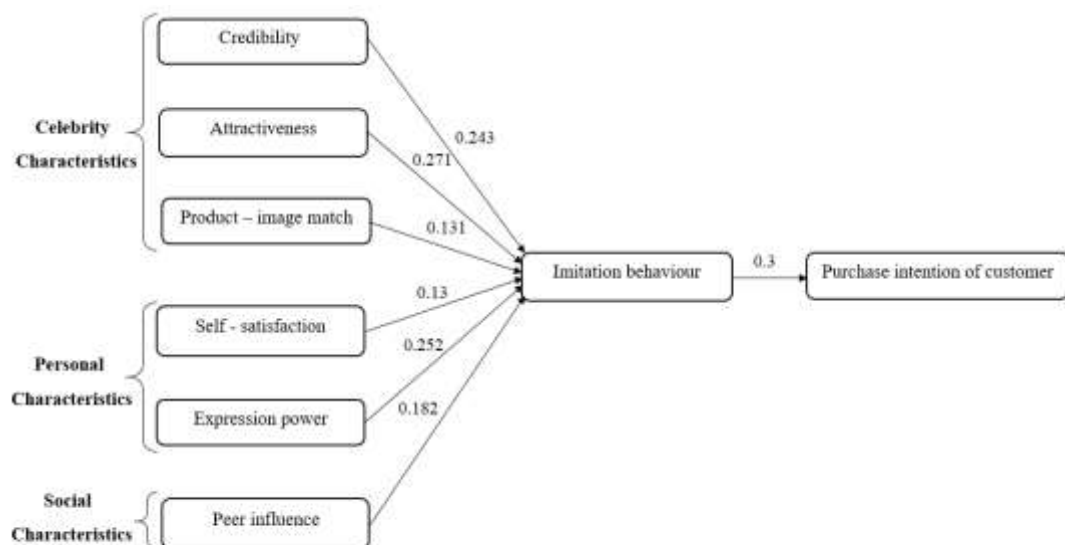


**FIGURE 3:** The final research model



## CONCLUSION AND DISCUSSION

This study looked into brand marketing strategy as well as how the three features (celebrity features, personal attributes, and social factors) influence customer buying behavior, particularly through celebrity endorsement, which has an impact on Toyota Vios' productivity.

In conclusion, the model's results are statistically significant. First, the findings show that through a mediator of imitation behavior, the three aspects of celebrity (credibility, product-image match, attractiveness), personal (self-satisfaction, manifestation of power), and social (peer influence) are positively associated with customers' purchasing intentions.

This finding is consistent with many other studies that highlight the impact of celebrity features, personal attributes, and social attributes in affecting consumer purchasing intentions (Nhung, Sarinya and Claire, 2011; Choi and Rifon, 2012). Similar to a research review by Awasthi and Choraria, 2015, the research highlights that imitation behavior has a crucial influence on public perceptions via celebrity endorsement. This indicates how celebrities' appeal and credibility, as well as their product match image, influence their attitudes as middlemen, as prior study has shown (Eisend and Langner, 2010; Simmers, Dameron-Martinez and Haytko, 2009). An appealing and trustworthy celebrity will have a better chance of convincing clients if the community imitates a famous image. Convincing is more productive when specific models can be paired with the product and its marketing purpose, as Mat et al. discovered in 2019. Customer pleasure is frequently mediated via emulation, which has an impact on behavior (e.g. Awasthi and Choraria, 2015). This means that an advertisement promoting a celebrity's imitation behavior, which the community would subsequently emulate, would be advantageous for self-satisfied consumers, similar to Anwar and Gulzar's 2011 study. According to previous studies, the expression of power has been demonstrated to positively affect the attitude of celebrity advertising. This demonstrates that buyers who wish to project power prefer celebrity offers rather than automatically imitating famous behavior (i.e. Nadeau, Balsan and Rochlen, 2016). Peer influence does not improve the impact of celebrity commercials, either separately or solely via imitation, according to research conducted by Scalici and Schulz (2014). Because the link between mimicking behavior and buying decision is the most profound effect, numerous earlier research, such as Inkon in 2013, have demonstrated this vital relationship.

This study has practical implications. These realistic suggestions are offered for persons in marketing managerial positions to enhance sales of the company's products by using the benefits of celebrity endorsements on customer purchasing decisions. Furthermore, the study reflects the need of picking a celebrity who is appropriate for specific market segments. The degree of celebrity appeal and prestige, for example, is crucial (i.e., the values are relatively high, 0.271 and 0.243, respectively), and it is one of the criteria that influence whether marketing strategies to reach consumers are effective or not, according to the study. As a consequence, organizations and marketing professionals must choose celebrities with great coverage, particularly in the field of automobiles, so choose endorsers who are professional car reviewers, as well as having community credibility and trust, and who are well-liked by customers. Furthermore, the expression of consumer power plays a vital role in the marketing campaign, as does celebrity endorsement (i.e. parameter 0.252). The advertising campaign for the Toyota Vios must convey the notion that the car model must be created elegantly and visibly in order to exercise consumer influence when used. Sim-



ultaneously, the firm should select a celebrity with significant authority and a distinct voice in the business (e.g., Tran Thanh, a well-known artist in the entertainment sector). This new marketing strategy is attracting new customers. Furthermore, studies demonstrate that if celebrities are mimicked, there is more tremendous potential for successful advertising. Furthermore, the research stresses the importance of celebrity advertising behaviors. The consumer's purchasing intention will be influenced if the commercial creates a positive feeling about itself.

There are a few problems in the report. To begin, this research is limited to clients who purchase Toyota Vios automobiles in Vietnam. If the study is replicated in other countries, the findings may have a better chance of being generalized. Secondly, only three factors (credibility, attractiveness, product-image fit), personal qualities (i.e. self-satisfaction and expression power), and social qualities (i.e. peer influence) show in the model, but additional aspects can affect results as well. As a result, future research should focus on other aspects of celebrity endorsement. Third, the quantitative method does not reveal whether celebrities motivate buyers to take action. The absence of scientific methodologies makes it challenging to have a comprehensive understanding of celebrities' influence on client purchasing decisions.

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## APPENDIX

### 1. Credibility (Awasthi and Choraria, 2015)

|      |                                                             |
|------|-------------------------------------------------------------|
| CRE1 | The star appears to be trustworthy in the advertising.      |
| CRE2 | In the commercial, the performers appear appealing.         |
| CRE3 | Celebrity shows appear to be trustworthy in advertisements. |
| CRE4 | The celebrity in the advertisement is trustworthy.          |

### 2. Product – Image match (Choi and Rifon, 2012; Kutthakaphan & Chokesamritpol, 2013; Löfgren & Li, 2010)

|      |                                                                                                                                        |
|------|----------------------------------------------------------------------------------------------------------------------------------------|
| IMA1 | That celebrity endorsement, in my opinion, is the ideal Toyota Vios spokesperson.                                                      |
| IMA2 | I immediately associated the celebrity endorsement with the Toyota Vios brand (think of Toyota Vios when talking about the celebrity). |
| IMA3 | Toyota Vios has a consistent celebrity image.                                                                                          |

### 3. Self – satisfaction (Awasthi and Choraria, 2015)

|      |                                                                                            |
|------|--------------------------------------------------------------------------------------------|
| SAT1 | The actress that appears in the Toyota Vios commercial is gorgeous.                        |
| SAT2 | The actor in the Toyota Vios commercial appears to be elegant.                             |
| SAT3 | I'm more interested in the Toyota Vios commercial, which features a lovely/handsome actor. |

### 4. Attractiveness (Awasthi and Choraria, 2015)

|      |                                                                                     |
|------|-------------------------------------------------------------------------------------|
| ATT1 | Celebrities motivate me to improve my appearance.                                   |
| ATT2 | I am thrilled when I follow celebs who have been recommended by others/celebrities. |
| ATT3 | Products and services that have been suggested by celebrities are worth purchasing. |

### 5. Expression of power (Awasthi and Choraria, 2015)

|      |                                                                                                                  |
|------|------------------------------------------------------------------------------------------------------------------|
| EXP1 | To accomplish what I want, I sometimes have to compete with others using the precious Toyota Vios brand.         |
| EXP2 | I feel that owning a Toyota Vios product will outperform that of a competitor.                                   |
| EXP3 | In order to progress in life, I occasionally have to step on others by purchasing Toyota Vios value merchandise. |

### 6. Peer Influence (Awasthi and Choraria, 2015)

|      |                                                                                        |
|------|----------------------------------------------------------------------------------------|
| PEE1 | I observe what they are doing and consult with my colleagues before making a purchase. |
| PEE2 | It's vital to me that my friends like the products and brands I choose.                |
| PEE3 | I just bought those products, and my buddies think they're great.                      |

### 7. Imitation behavior (Awasthi and Choraria, 2015)

|      |                                                                          |
|------|--------------------------------------------------------------------------|
| IMI1 | I want to be as talented as movie stars.                                 |
| IMI2 | I'm hoping to be as trendy as the characters in commercials.             |
| IMI3 | I, like celebrity stars, simply want to be fashionable.                  |
| IMI4 | Even I have tried to change aspects of my looks to resemble celebrities. |
| IMI5 | I adore and respect the celebrity.                                       |

### 8. Purchase intention (Awasthi and Choraria, 2015)

|      |                                                                                           |
|------|-------------------------------------------------------------------------------------------|
| PUR1 | I would definitely buy the product that the celebrity supports in the advertisement.      |
| PUR2 | I can buy the things that the celebrity promotes instead of the ones that aren't.         |
| PUR3 | Celebrity-driven advertisements persuade me to purchase a product that has been endorsed. |

# THE ROLE OF CUSTOMER'S EXPERIENCE FROM AUGMENTED REALITY ON PURCHASE INTENTION IN SHOPPING

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## ABSTRACT

Augmented Reality technology (AR) is widely known and used across the world. The combination of AR and environmental elements creates an interactable interface that improves the shopping experience. This study explored the effect of three dimensions of customer experience on purchase intentions in shopping centers. The 302 respondents were customers visiting shopping centers and had used AR. The results derived from Partial Least Square (PLS) were that pragmatic and social experiences had the highest total effects on purchase intention through customer brand engagement as a mediator. To promote more sales and branding, shopping center management should focus on improving the pragmatic experience and encouraging customers to share information with other customers or family members. The consistency of the AR application, not the appeal of the AR, also improved branding. Real estate developers have discovered ways to utilize AR to increase customers' purchases when they are shopping in shopping centers.

**KEY WORDS:** Partial Least Square Analysis, Customer Brand Engagement, Pragmatic Experience, Social Experience, Sensory Experience

## INTRODUCTION

Technological advancement has created more opportunities for people to interact with them (Dirin and Laine, 2018). Thus, reality technologies have become a tool of today's marketing. To provide customer experience, reality technologies have been applied in both commercial and residential real estate. One of the famous reality technologies that is widely used is AR. AR integrates physical world and virtual reality together (Lamantia, 2009). However, users can still connect with the surrounding world (Pavlik and Bridges, 2013).

AR technology development has been raised greatly in the field of retail nowadays (Jaekel, 2016). The evolution of AR has transformed traditional retail and marketing activities because AR can combine digital elements into the environment of retail (Salehi, Salimi, and Haque, 2013; Saprikis, Avlogiaris, and Katarachia, 2020). Thus, AR can create immersive shopping experiences (Bulearca and Tamarjan, 2010) and virtual content from product images, animations, and features to get interaction from customers (Azuma et al., 2001; Chen, 2020). Experiences created by AR give customers several values and benefits (J. Kim and Forsythe, 2008; McCarthy and Wright, 2004; Saprikis et al., 2020). By using AR, it is easy to provide additional information about products and services and raise the shopping experience. Moreover, it is easier to obtain promotional offers and the best value and encourage the customer to enter a store. AR has proven to be a valuable tool for creating visualization and interaction in marketing (Saprikis et al., 2020; Zainuddin, Rambli, and Sulaiman, 2012). Abrar (2018) that AR has a significant influence on customer brand engagement and purchase intentions. AR can aid in purchasing decisions because it is simple to use and provides entertainment value (Remmerden, 2019; Saprikis et al., 2020).

There are several types of experiences generated by AR, such as sensory experience, social experience, and pragmatic experience. Many papers have proposed that the experience of AR can positively influence purchase intentions (Esmaeilpour and Mohseni, 2019; Poushneh and Vasquez-Parraga, 2017; Yang and He, 2011). However, many studies mention that experiences from AR would generate customer brand engagement (Altschwager, Conduit, Bouzdine-Chameeva, and Goodman, 2017; Cachero-Martínez and Vázquez-Casielles, 2017). Moreover, some papers also mention that customer brand engagement can positively influence purchase intentions too (Abrar, 2018; Altschwager et al., 2017; Vivek, Beatty, and Morgan, 2012). As a result, the role of customer experience from AR is worth studying and debating, whether it will directly influence purchase intention or will use customer brand engagement as a medium to influence purchase intention. Therefore, this research attempts to study the role of customer experiences created by AR in shopping centers and whether all customer experiences can influence the purchase intention of the brand by themselves or the medium, as customer brand engagement is needed in order to increase purchase intention.

## LITERATURE REVIEW

### Theories about Customer Experience

Customer experiences are an important part of this research. There are several kinds of theories of experience related to customer experience. However, because the proposed models are relevant to the scope of this research, this study chose to focus on the customer



experience theories reviewed in the study of Verhoef et al. (2009). The customer experience theories of Verhoef et al. (2009) are divided into three dimensions. The first dimension is the customer experience's theories on physical realm. The second dimension is the digital realm. The last dimension is the social realm.

## **Marketing 4.0**

According to Kotler, Kartajaya, and Setiawan (2016), marketing has changed over a period of time. Different approaches to marketing, including online and offline, were generated. Marketing 4.0 is one of the marketing trends in the digital economic era. It consists of three main combinations: online and offline, style and identity of the brand, and customer engagement creation through the relationship between humans and computers. The purpose was to build positive advocacy or a group of customers that would recommend the brand to other customers.

Traditional marketing is likely to separate customers into groups before choosing the targeted customer for segmentation and targeting of the customer community, which may not be applicable in the digital economy era. Customers' networks have emerged as a group of customers in the digital economy's era.

In the digital era, the brand changing customer awareness to a customer's sales cycle is not sufficient. The brand should attempt to develop customers to be brand advocates. One of the important strategies is to create customer engagement. There are three methods of customer engagement creation: enhancing digital experience with mobile apps, providing solutions with social customer relation management (CRM), and driving desired behavior with gamification.

## **Studied Variables**

### ***Sensory Experience***

Sensory experience is the experience of a sense of customers that can influence customers' perception of products and service, judgment, and customers' purchasing behavior (Smith and Wheeler, 2002). The customer's senses have been applied to shopping and retail because they can affect the perception of customers of both brands and stores (Helkkula, 2011; Moreira, Fortes, and Santiago, 2017). In shopping centers and retail, the absolute well-being of customers is emphasized by providing and modifying components that affect the environment of the area for the improvement of the customer's sensory experience. Examples of factors that can help to provide a good sensory experience are the light, product layout, design, smell, color, music, etc. (Cachero-Martínez and Vázquez-Casielles, 2018).

Sensory Experience consists of five senses of customers: visual, scent, auditory, taste, and tactile (Schmitt, Brakus, and Zarantonello, 2015; Warren, 2012). This research will focus on two types of senses (visual and auditory) which can be created by AR. Colors, models, distance, particle size, illumination, and digital marketing are all part of the visual experience. Auditory is one of the sensory experiences that focuses on the sense of hearing, whether it is constantly active and being a point of attention (Cachero-Martínez and Vázquez-Casielles, 2018).

In this study, Sensory experience is an experience that aims to offer sensory stimulation and consists of visual, scent, auditory, taste, and tactile characteristics. This research will focus on two types of senses (visual and auditory) which can be created by AR. According to (Schmitt, 1999), sensory experience influenced customer brand engagement. The finding begins with the customer's attention to the new information from the brand about the taste and the smell of the wine. Furthermore, customers can recognize the taste and the pairing of food and wine.

In another study by Esmaeilpour and Mohseni (2019), sensory experiences were one of the customer experiences that has a positive and significant influence on customer purchase intention. Thus, Sensory experience influences Customer brand engagement and Purchase intention.

### ***Social Experience***

Social experience denotes the customer's social context and the relationship with other customers (Cachero-Martínez and Vázquez-Casielles, 2018). Social experience is generated when receiving information about the new product while shopping with family or friends, interacting with other customers, and shopping for social identification (Cachero-Martínez and Vázquez-Casielles, 2017). It is the perception of customers according to the sincerity, openness, and good manners of the members of each community (Nambisan and Watt, 2011). The community of customers can represent the social environment and the social experience that enables the strong customer's network and relationships (Preece and Preece, 2000).

In this study, Social experience is the customer's social context and the relationship with other customers that receive information about the new product while shopping in a shopping center. The study of Barber, Kuo, Bishop, and Goodman (2012) mentioned that customers are more likely to be motivated and intend to purchase with the aid of social interaction. The reason is that they receive experience from their communication that can motivate them to have purchase intentions. According to the result of the standard path coefficients of Esmaeilpour and Mohseni (2019)s' study, social experiences significantly influence purchase intention with a 95% confidence level. In the same way, Nasermodeli, Ling, and Maghnati (2013) showed that social experience has a positive influence on purchase intention. Thus, Social experience influenced Customer brand engagement and Purchase intention.

### ***Pragmatic Experience***

The pragmatic refers to the customer-motivated activity, value, functionality, efficiency, convenience, and usability of the products during shopping. It refers to saving and receiving products that are practical and recognized quality. Furthermore, the speed and efficiency with which information can be found and purchased are issues (Walsh, Shiu, Hassan, Michaelidou, and Beatty, 2011). Pragmatic experience is connected to the goal-oriented behavior of customers and displayed in useful, valuable, and worthwhile (Hoffman and Novak, 1996; Mathwick, Malhotra, and Rigdon, 2001).

Pragmatic experience is defined as experience gained from the activity, value, functionality, efficiency, convenience, and usability of the products during shopping at a shopping center. Customers can be encouraged by utility, value, functionality, efficiency, conven-

ience, and usability (Walsh et al., 2011). Pragmatic experience aims to represent the brand and bring greater attention to the brand that can lead to customer brand engagement (Altschwager et al., 2017). Furthermore, using AR, the information about products leads to a better purchasing experience, reduces customer anxiety, and aids in decision making. (T.-L. Huang and Liu, 2014). Thus, Pragmatic experience influenced Customer brand engagement and Purchase intention.

### ***Customer Brand Engagement***

Customer brand engagement is described by how the customer's state of mind is perceived in an inspirational, brand-related context. Each person's cognitive level and state of mind are unique to how they describe emotional and behavioral activity with a specific brand (L. Hollebeek, 2011). There are multidimensional for engagement such as cognitive, affective, and customer experience (L. D. Hollebeek, Glynn, and Brodie, 2014).

The concept of engagement is generated from psychology, sociology, and organizational behavior (L. Hollebeek, 2011). The evolution of technology helps the organization to provide technological tools to engage the customer with their brand (L. D. Hollebeek et al., 2014). According to McLean and Wilson (2019), an AR application that is provided by the retailer can be applied as a tool to create customer brand engagement. The findings also highlighted how customer satisfaction from AR and other brands' technological tools can increase customer interaction with the brand. Moreover, Brodie, Hollebeek, Jurić, and Ilić (2011) stated customer brand engagement from the technology provided by the brand can help improve customer relationship with the brand.

Customer brand engagement is the aim of motivational, brand-related, and context-improvement perceived by customers. It is described by cognitive level, subjective, and social activity toward certain brand interactions. According to the study of Brodie et al. (2011), customer brand engagement has positively influenced brand relationships and purchase intentions at specific times and situations. The higher the brand engagement, the more intense the relationship, such as membership, allowances, and discounts that can turn to purchase intentions in the future (Algesheimer, Borle, Dholakia, and Singh, 2010). An analysis from the study of Şahin (2017) emphasized that creating a message and information that engages customers can generate purchase intentions. Customers were entertained and informed and connected to the brand. As a result, customer brand engagement affects purchase intentions.

### ***Purchase Intention***

Purchase intention is described as a user willing to buy products and services (E. Huang, 2012). Purchase intention is the personal action propensity or personal conscious plan to try purchasing a brand (Spears and Singh, 2004). It is used to measure the consideration of purchasing and the willingness to buy from customers. The higher the willingness to buy products and services, the higher the purchase intention (Dodds, Monroe, and Grewal, 1991).

Purchase intention is used to measure whether customers are interested in the product and the possibility of purchasing the product. Furthermore, it demonstrates future purchasing behavior (A. J. Kim and Ko, 2012). Purchase intention can be used to forecast the buying decisions of customers, sales of products or services in marketing research (Armstrong,

Morwitz, and Kumar, 2000; Xie, 2012) and to appraise the customers' purchasing power (Linh, 2014).

In this research, Purchase intention is the personal action propensity or personal conscious plan to try purchasing a brand. It is used to measure the consideration of purchasing and the willingness to buy from customers.

## **RESEARCH METHODOLOGY**

The conceptual framework of this research consists of 5 constructs: sensory experience, social experience, pragmatic experience, customer brand engagement, and purchase intention. The customer experiences from using AR in shopping centers were evaluated whether can directly influence the purchase intention or need the customer brand engagement as a mediator to influence purchase intention.

### **Samples**

In this research, the was Thai people who have experience in using AR provided in the shopping center to shop with brands' stores. For example, #ColorMe in Watson application and store and Virtual Artist in Sephora to go application. The sample size was calculated from the assumption of unknown population quantity on convenient sampling group. The calculated recommended number of samples were 225 samples. The calculation assumed that the population consisted of Thai people with experience in AR provided in the shopping centers were unknown. Because of the type of target sample and the difficulty of data collection, the method of samples collection was convenient sampling technique. The questionnaires were distributed through many channels, such as open-source community, to ensure random samples. Data collected for three months starting in 2021 with the total of 352 samples were collected via the questionnaires on the online platform. The data was filtered to remove any incorrect information. After the data filtering process, the statistical analysis was applied with 302 samples.

### **Partial Least Square Analysis**

Solving equations that have multiple independent variables, Multiple Regression Analysis, Factor Analysis, and Multiple Discriminant Analysis are normally used; however, according to the social science research problem, relationships may not simply one-way relationships but multiple ways. Thus, Structural equation modeling (SEM) was developed as a method of analysis which simple linear regression analysis cannot do (Tirakanant, 2003). Multi-linear model existed when more than two linear relationships and dependent variables in one model. The multi-level relationship rendered simple linear regression analysis useless in this situation. The purpose of this study is to investigate livability, perceived value, and occupant satisfaction as a whole model; therefore, SEM type analysis was suitable. Furthermore, SEM consists of two main types of analysis: covariance-based SEM and variance-based SEM. The variance-based Partial least square SEM is more appropriate for this study since the study was an exploratory research (Diamantopoulos, 1994). PLS starts by estimating case values as opposed to a covariance-based SEM that predicts the initial model parameter before examining the case values. The latent variables are considered as a linear combination of empirical indicators and the estimate is considered a perfect alternative to the latent variables (Dijkstra, 1983; Fornell and Bookstein, 1982).

The model's outputs reflect latent variables that may be approximated and measured by a set of quantifiable indicators represented by the empirical concept. In conclusion, PLS-SEM is more suitable for this research. (See Appendix B).

PLS analysis is separated into two main parts: Measurement model evaluation and Structural model assessment. In measurement model evaluation, Outer loading can be evaluated from the accuracy of variables which is the consistency measurement of each question whether the principle of questions is the same. The standardized outer loadings of questions should not lower than 0.7 (Hair, Ringle, and Sarstedt, 2013). Reliability tests verify whether the questions are accurate and can be applied in every place and time. Cronbach's alphas verify whether the questions are accurate and can be applied in every place and time. Cronbach's alpha should not be lower than 0.7 (Hair et al., 2013). Convergent validity explains the compatibility of the measuring question and the related latent variable. If the question has average variance extracted (AVE) value higher than 0.5, the latent variable is explained by measuring questions higher than 50 percent. According to Fornell and Larcker (1981) criteria, the square root of average variance extracted of latent variable ( $\sqrt{\text{"AVE"}}$ ) are compared to coefficient of the other variables in the model. The value of ( $\sqrt{\text{"AVE"}}$ ) should higher than the coefficient between latent variables. Cross loading is the method of determining the correlation for all constructs. The value of factor loading of each variable should higher than 0.7 (Chin, 1998). Structural model assessment mainly analyzes the relationship between independent and dependent variables. Coefficient determinant or R<sup>2</sup> is the way that use to determine the variance of the endogenous variable expressed by the exogenous variable. To simply put, R<sup>2</sup> value explain how well the model can predict which R<sup>2</sup> value should not lower than 0.25 because the ability of X would be too low to explain Y (Hair et al., 2013).

## RESULTS

The model analysis consists of measurement model evaluation and structural model assessment. In the measurement model evaluation, the outer model reflects the relationships between unobserved variables and the construct. In structural model assessment, the inner model reflects structural relationships between constructs.

### Respondents Demographic

Approximately results showed 186 of the respondents were males, 115 of the respondents were females, and 1 were of other gender, so majority of respondents were male. The age of respondents who have experience with AR at shopping center were separated into different generations. 84 of the respondents were at the age of 20 and below, 136 of the respondents were at the age of 21-39. 42 were at the age 40-56, and 40 respondents were at the age 57-76; therefore, the majority of people who have experience from using AR at shopping center was the people who have the age lower than 39 years old. Mainly, the education level was bachelor's degree being students and employee. Many younger respondents know about AR. AR is commonly used for teaching, games, and marketing, and for promotional reasons. Younger generations have numerous reasons to use AR. More possibilities could be explored with AR. Nearly all responders have utilized True 5G AR, which offers ads to customers. Recently, shopping malls and retail supermarkets have been used. This indicates potential advertisement and promotion opportunities for AR providers and brands to invest in. The results showed that over 60% of respondents have a

job and can afford products and services without much financial restraint. Adjust brand advertising according to the respondents' demand and potential per capita spending. (See Appendix A1).

## Analysis Results

According to the initial scope of the study, the model consists of five constructs (1) Sensory Experience (2) Social Experience (3) Pragmatic Experience (4) Customer Brand Engagement, and (5) Purchase Intention. The scope represents the relationship between latent variables and observed variables. In the model, the latent variables are represented by a circle, while the observed variables are represented by a rectangle.

The measurement model evaluation was evaluated by testing the accuracy of observed variables or each question of latent variables that are used to measure the assigned construct. The average outer loading of sensory, social, and pragmatic experience were 0.835, 0.780, and 0.814 respectively. The outer loading of customer brand engagement and purchase intention were 0.785 and 0.831. All indicators outer loadings were above the recommended value of 0.7, thus there was no significance to eliminate the indicator further. The indicator reliability test verifies the consistency of a test measuring characteristics despite the circumstances of data collection such as time and place. The value which reflects reliability is Cronbach's Alpha. Cronbach's Alpha values of sensory, social, pragmatic experience, customer engagement, and purchase intention were 0.891, 0.839, 0.872, 0.843, and 0.887 which all were above 0.7, thus the measuring variable is reliable. From the analysis results, AVE values of sensory, social, pragmatic experience, customer engagement, and purchase intention were 0.698, 0.610, 0.664, 0.616, and 0.691 which all ranged above 0.5. All constructs were convergently valid. Fornell-Larcker criterion indicated the  $\sqrt{\text{AVE}}$  must be higher than 0.7 and  $\sqrt{\text{AVE}}$  of the specific construct must be higher latent variable correlation as well. The square root of AVE values were above 0.7 and were higher than other latent variable correlations, thus Fornell-Larcker criterion is passed. Cross loadings test is like the outer loadings test. The test further calculates the outer loadings of the indicators on other constructs other than the assigned construct. Loading of the indicators fitted the assigned construct and no indicator is displaced. Overall, the model passed two criteria, thus the model is discriminately valid.

After the model measurement had been evaluated, the structural model measurement was proven. To determine the path coefficient, the inner model evaluation and the hypotheses were used to test the level of significance and the coefficient determinant of the model. In the model assessment, the R<sup>2</sup> value explains the variance of dependent latent variables and is explained by the independent latent variables. Two dependent latent variables in this preferred model were customer brand engagement and customer purchase intention. The R<sup>2</sup> value and R<sup>2</sup> value adjusted for brand engagement were 0.548 and 0.543. This implies three independent variables can explain the variance in brand engagement of 54.8 percent. The purchase intentions were 0.474 and 0.467, respectively, which implies three variables and brand engagement can explain a purchase intention of 47.4 percent. All R<sup>2</sup> values were higher than 0.25, thus the structural model was valid. Hypothesis testing consists of two parts: path coefficient analysis and total effects analysis. Both analysis parts were tested with PLS bootstrapped 5,000 samples. The randomly generated samples will further redistribute a variety of data to minimize skewness in the data. The test must pass the significance level with a P-value of less than 0.05 based on an initial Z-score of 1.96 and a confidence level of 95 percent.

Total effect analysis showed pragmatic experience had the highest total effect on customer brand engagement and purchase intention in general, with 0.444 and 0.345, respectively. Customers weigh indicators such as the price and quality of the product, and beneficial information, the most. Customers' perceptions of a brand are positively influenced by useful information and promotions. Price and the quality of the product, including promotions, are very important when considering the actual use of the product. Social experience has the second overall total effect on customer brand engagement and purchase intention, at 0.228 and 0.240, respectively. Social communication allows customers to exchange information and feedback about brands and products by using AR. Sensory experiences have the least influence on customer brand engagement and purchase intentions. The total effects are 0.188 and 0.173, respectively. This indicates that customers value the AR stimulus less than other indicators. (See Appendix A and B).

## **CONCLUSION AND RECOMMENDATION**

The proposed model was assessed by the structural model to verify the significance of the relationship assigned. The customer perceives the stimuli in the sensory experience differently. The interaction between stimuli and customers could be very close. Another suspected reason is that the exchange of information among customers promotes more engagement and does not alter customers' purchasing behavior directly. Other than the two paths, all the other paths were significant. When considering the total effects on the path, pragmatic experience affects customer brand engagement and purchase intention the most, and social experience affects customer brand engagement and purchase intention the second most. Useful information and promotions have positively affected brand engagement and the purchasing behavior of customers. Because they indicate the actual use of the product, the price and quality of products, including promotions, are directly influenced. The brand must consider the use of AR as a useful tool for its competitors for advertisements and promotions and ensure the information is useful and direct. Lastly, social interaction will promote information communication and further encourage customers to engage with the brand.

AR has both direct and indirect benefits in real estate. An abundance of data analysis findings supports brand and purchase intentions through human interactions. The properties available for lease, like condos and houses, allow clients to learn about furnishings without purchasing anything like décor. Direct interactions can encourage customer intentions and brand engagement. Indirect effects of AR can be observed in a retail shopping complex. Customers using AR improve retailers' revenue by buying more from several brands. It gives rise to a chance for developers to raise their gross profit rents as well.

Conclusively, AR gives both retail brands and real estate developers distinct benefits. Yet AR has different features, uses, and user interface (UI). Without knowing the shopping center platform, measuring customer experience with AR in shopping centers is inaccurate. To obtain more accurate results, the scope should focus on a specific type of AR platform. Furthermore, AR is a modern-day technology. The outcomes of each age of the sample can be somewhat different. Even though this research asked for the participants' ages, the number of responses was not enough to provide distinct age groups. Sample size should define the sample of the research generation and cover every age to improve the results.

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## APPENDIX A

**TABLE A1:** Demographic of samples.

|                              | Variable                          | Distribution | %      |
|------------------------------|-----------------------------------|--------------|--------|
| Gender                       | Male                              | 186          | 61.59% |
|                              | Female                            | 115          | 38.08% |
|                              | Others                            | 1            | 0.33%  |
| Age                          | 20 and below                      | 84           | 27.81% |
|                              | 21 – 39                           | 136          | 45.03% |
|                              | 40 – 56                           | 42           | 13.91% |
|                              | 57 – 76                           | 40           | 13.25% |
|                              | 77 and above                      | 0            | 0.00%  |
|                              |                                   |              |        |
| Level of education           | Middle School diploma             | 11           | 3.64%  |
|                              | High School diploma or equivalent | 87           | 28.81% |
|                              | Bachelor's Degree                 | 142          | 47.02% |
|                              | Master's Degree                   | 57           | 18.87% |
|                              | Doctoral Degree                   | 3            | 0.99%  |
|                              | Others                            | 2            | 0.66%  |
| Monthly Income               | Lower or equal to 20,000 baht.    | 98           | 32.45% |
|                              | 20,001 – 30,000 baht.             | 55           | 18.21% |
|                              | 30,001 – 40,000 baht.             | 58           | 19.21% |
|                              | 40,001 – 50,000 baht.             | 30           | 9.93%  |
|                              | 50,001 – 100,000 baht.            | 46           | 15.23% |
|                              | More than 100,000 baht.           | 15           | 4.97%  |
| Occupation                   | Student                           | 99           | 32.78% |
|                              | Employee                          | 36           | 11.92% |
|                              | State employee                    | 89           | 29.47% |
|                              | State enterprise employee         | 15           | 4.97%  |
|                              | Entrepreneur                      | 26           | 8.61%  |
|                              | Freelance/Investor                | 25           | 8.28%  |
|                              | Jobless                           | 7            | 2.32%  |
|                              | Others                            | 5            | 1.66%  |
|                              |                                   |              |        |
| AR with product and services | Videogame                         | 119          | 39.40% |
|                              | Education                         | 143          | 47.35% |
|                              | Health                            | 98           | 32.45% |
|                              | Real Estate                       | 70           | 23.18% |
|                              | Marketing/Promotion               | 107          | 35.43% |
|                              | Live Event/Concerts               | 27           | 8.94%  |
|                              | Television and Movies             | 69           | 22.85% |
|                              | Others                            | 64           | 21.19% |
|                              |                                   |              |        |

**TABLE A1: (Continued.)**

|                       | Variable                              | Distribution | %      |
|-----------------------|---------------------------------------|--------------|--------|
| AR Used               | #Colorme by Watson                    | 59           | 19.54% |
|                       | Virtual Artist by Sephora             | 34           | 11.26% |
|                       | Virtual Fitting with AIS Smart mirror | 47           | 15.56% |
|                       | True 5G AR                            | 113          | 37.42% |
|                       | Others                                | 116          | 38.41% |
| Last AR used location | Shopping Center                       | 189          | 62.58% |
|                       | Retail Supermarket                    | 116          | 38.41% |
|                       | Park                                  | 35           | 11.59% |
|                       | Fitness/Sport center                  | 46           | 15.23% |
|                       | Workplace                             | 59           | 19.54% |
|                       | Residence                             | 49           | 16.23% |
|                       | Hospital                              | 26           | 8.61%  |
|                       | Others                                | 47           | 15.56% |

**TABLE A2: Results of measurement model evaluation.**

| Construct                 | Scale items | Outer loadings | AVE   | Composite Reliability | Cronbach's Alpha |
|---------------------------|-------------|----------------|-------|-----------------------|------------------|
| Sensory                   | SEE1        | 0.816          | 0.698 | 0.920                 | 0.891            |
|                           | SEE2        | 0.860          |       |                       |                  |
|                           | SEE3        | 0.836          |       |                       |                  |
|                           | SEE4        | 0.837          |       |                       |                  |
|                           | SEE5        | 0.826          |       |                       |                  |
| Social                    | SOE1        | 0.739          | 0.610 | 0.886                 | 0.839            |
|                           | SOE2        | 0.774          |       |                       |                  |
|                           | SOE3        | 0.802          |       |                       |                  |
|                           | SOE4        | 0.803          |       |                       |                  |
|                           | SOE5        | 0.782          |       |                       |                  |
| Pragmatic                 | PE1         | 0.810          | 0.664 | 0.907                 | 0.872            |
|                           | PE2         | 0.859          |       |                       |                  |
|                           | PE3         | 0.829          |       |                       |                  |
|                           | PE4         | 0.766          |       |                       |                  |
|                           | PE5         | 0.805          |       |                       |                  |
| Customer Brand Engagement | CBE1        | 0.784          | 0.616 | 0.889                 | 0.843            |
|                           | CBE2        | 0.803          |       |                       |                  |
|                           | CBE3        | 0.779          |       |                       |                  |
|                           | CBE4        | 0.807          |       |                       |                  |
|                           | CBE5        | 0.750          |       |                       |                  |
| Purchase Intention        | PI1         | 0.827          | 0.691 | 0.918                 | 0.887            |
|                           | PI2         | 0.858          |       |                       |                  |
|                           | PI3         | 0.855          |       |                       |                  |
|                           | PI4         | 0.805          |       |                       |                  |
|                           | PI5         | 0.808          |       |                       |                  |

**TABLE A3:** Hypotheses test results.

| Hypothesis | Relationship | Sign | Path Coefficient | T Values | P Values | Result               |
|------------|--------------|------|------------------|----------|----------|----------------------|
| H1         | SEE -> CBE   | +    | 0.189            | 3.289    | 0.001    | <b>Supported</b>     |
| H2         | SEE -> PI    | +    | 0.112            | 1.896    | 0.058    | <b>Not Supported</b> |
| H3         | SOE -> CBE   | +    | 0.224            | 4.401    | 0        | <b>Supported</b>     |
| H4         | SOE -> PI    | +    | 0.163            | 1.843    | 0.065    | <b>Not Supported</b> |
| H5         | PE -> CBE    | +    | 0.445            | 8.242    | 0        | <b>Supported</b>     |
| H6         | PE -> PI     | +    | 0.201            | 3.535    | 0        | <b>Supported</b>     |
| H7         | CBE -> PI    | +    | 0.326            | 5.215    | 0        | <b>Supported</b>     |

*Noted:* If p-value <0.05, value is statistically significant.

**TABLE A4:** Total effects.

| Relationship                                | Direct Effect | Indirect Effect | Total Effect |
|---------------------------------------------|---------------|-----------------|--------------|
| Sensory -> Customer Brand Engage            | 0.188         | 0.000           | 0.188        |
| Sensory -> Purchase Intention               | 0.112         | 0.061           | 0.173        |
| Social -> Customer Brand Engage             | 0.228         | 0.000           | 0.228        |
| Social -> Purchase Intention                | 0.166         | 0.074           | 0.240        |
| Pragmatic -> Customer Brand Engage          | 0.444         | 0.000           | 0.444        |
| Pragmatic -> Purchase Intention             | 0.201         | 0.144           | 0.345        |
| Customer Brand Engage -> Purchase Intention | 0.324         | 0.000           | 0.324        |

## APPENDIX B

**FIGURE B1:** Conceptual framework.

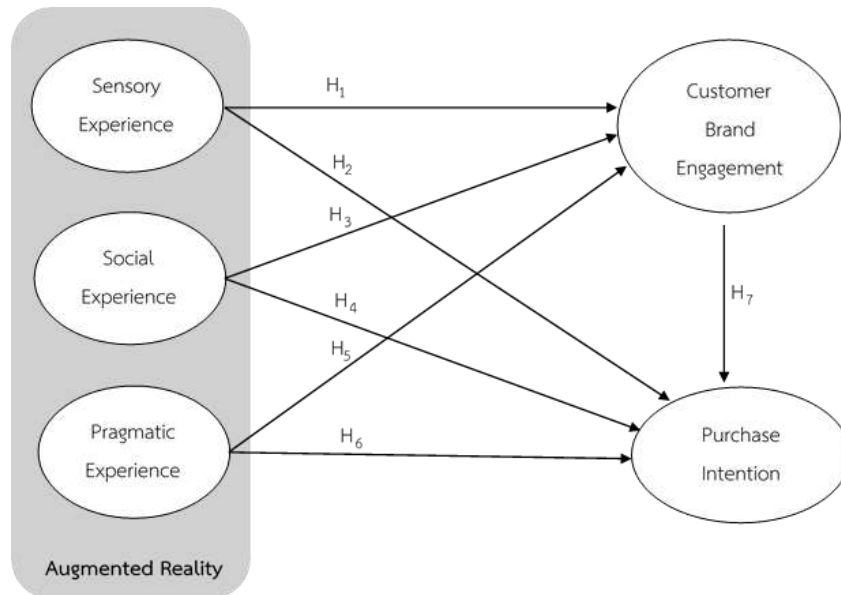


**FIGURE B2:** Analysis Model with path coefficient, p-value, and R<sup>2</sup> value.

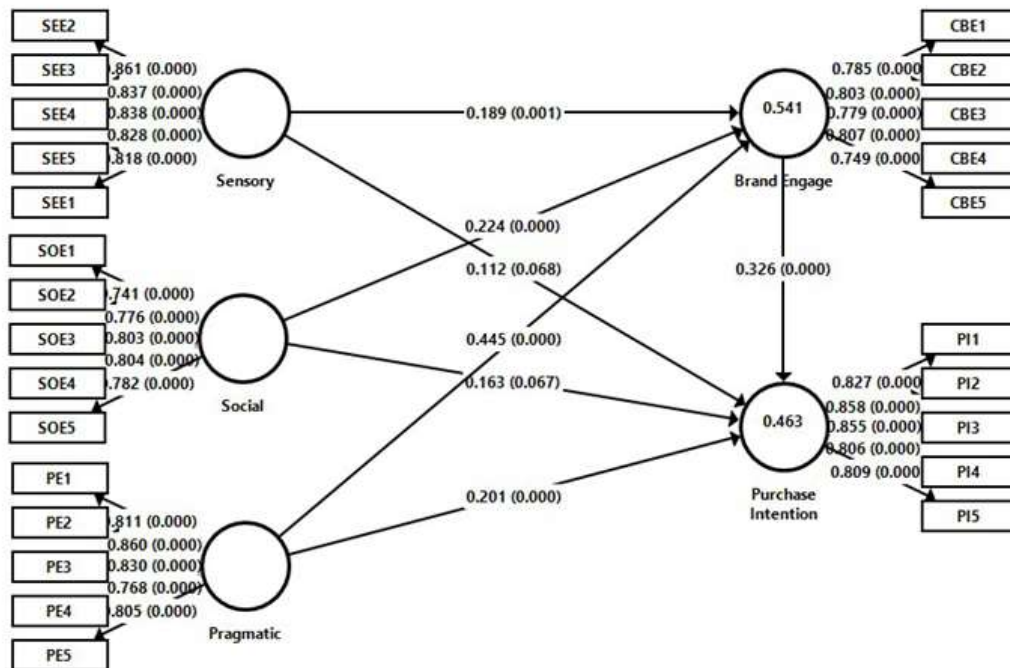
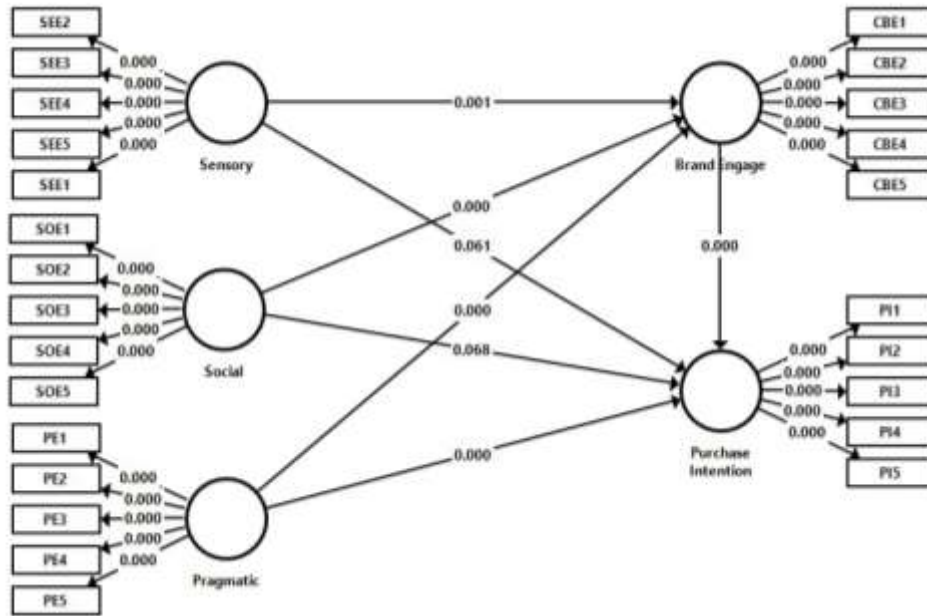


**FIGURE B3:** P-value test on hypothesis testing.





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**BUSINESS SKILLS AND PRACTICES OF AMBULANT ENTREPRENEURS  
IN THE CASE OF A SEMI-COMMERCIALIZED COMMUNITY**

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**ABSTRACT**

Entrepreneurship or locally termed as “business” is great deal for many Filipinos as most of them particularly address themselves- “may sariling negosyo”. Entrepreneurship in the country is associated with freedom, however at risk for challenges of a highly competitive market, lack of capital, credit, other resources, support and business fundamentals. Thus, this study was guided in measuring the overall condition of the ambulant-micro business entrepreneurs of Bayombong, Nueva Vizcaya, their personal and financial management practices; business skills, behaviors and attitudes by using descriptive-correlational approach as to elicit the relationships of the selected business constructs. An adopted questionnaire checklist was used to gather pertinent data from the 60 purposively selected respondents. The study had significantly showed that majority are married females and street food vendors. Males suggested higher incidence of performing for the business skills and practices set indicators.

**KEY WORDS:** Ambulant-Micro Business, Ambulant Vendors,  
Sources and Amount of Finances, Business Skills and Practices

## INTRODUCTION

Entrepreneurship is a big word for many Filipinos. A more commonly used word is “business” or as most Filipinos would say it “may sariling negosyo”. The people that are referred to as “small businessmen” are sari-sari store owners, ‘Jeepney’ and tricycle drivers, market vendors, banana cue and squid ball stall owners. (Reyes, 2009; Julian et al, 2015)

Filipinos would associate being an entrepreneur with freedom, though comes with many risks. Many small entrepreneurs face the challenges of a highly competitive market with lack of capital, resorting to credit and other resources, lack of support and business know how. Does this stop many small businessmen from going about their trade?

For these people, having small businesses is a matter of survival and reliance to the income to provide basic necessities. A study conducted by the Department of Trade and Industry showed that 99.7% of businesses in the country are micro, small and medium enterprises (De Leon, 2010).

These people provide many services and benefits that the rest of their countrymen take for granted. ‘Jeepney’ and tricycle drivers make transportation more affordable to those without cars, while sari-sari store owners make basic goods more accessible and affordable in many neighborhoods. Another major benefit that micro-entrepreneurs provide is employment to those who would otherwise not be employed in larger companies because of their lack of qualifications.

As a developing country, the Philippines has large informal sector as comprised of micro-enterprises. Many of these are severely resource-constrained small-scaled retailers or neighborhood store owners, market vendors and many other including night time workers in karaoke bars, whose survival in the business relies heavily on access to financing. Financing for these micro entrepreneurs usually comes from lending sector in the form of financiers, called “5-6” lending business. This study will give central attention to the practices, performance and problems encountered by this ambulant micro business sector.

Nowadays, the ambulant micro business sector has made a big name in terms of their contribution to the business economy of the country. Despite of their hard works it remains questionable on how they survive on to their business and how they managed their finances to remain competitive in the world of business. These are the factors that gave ideas to the researcher to make a study about the practices, performance and problems encountered by ambulant micro business entrepreneur.

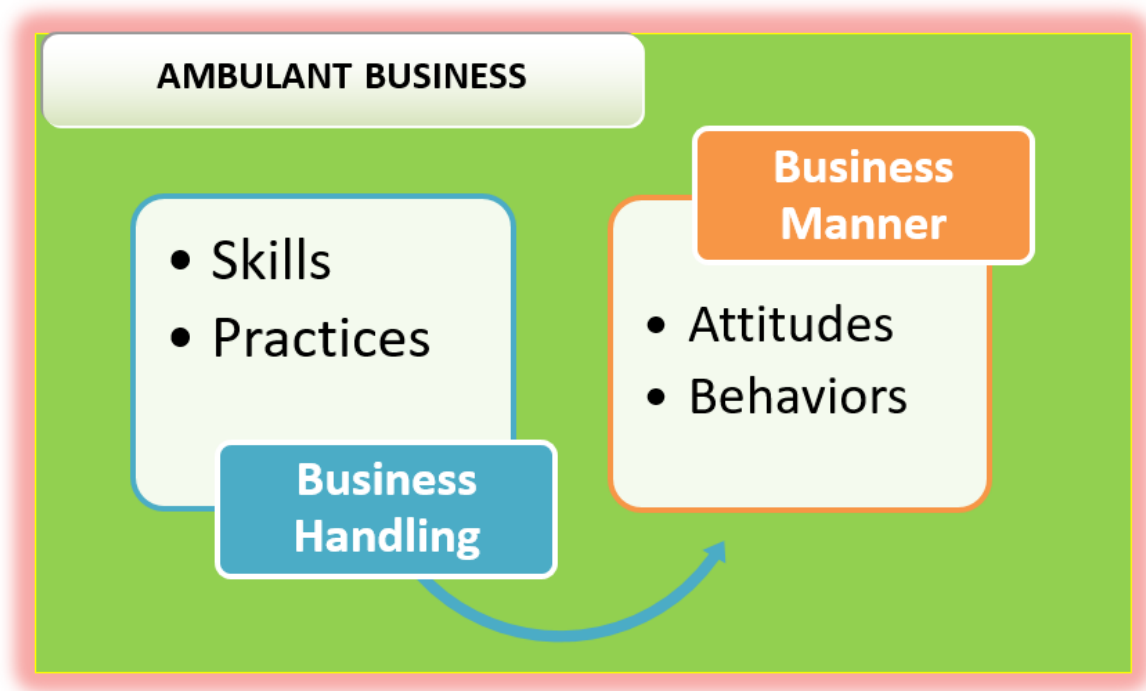
With the above justifications, this study was designed primarily to determine marketing strategies, behaviors among the emerging macro-financing businesses in the municipality; to detect some factors that contribute and/or motivate small-time entrepreneurs; and to identify some problems there might be in their day-to-day business activities.

## FRAMEWORK

Steven (2006) offered description of micro-marketing which is referred to the activities performed by the individual providers of goods and services within a macro-marketing system. Such organizations or businesses use various marketing techniques to accomplish objectives related to profits, market share, cash flow, and other economic factors that can enhance their wellbeing and position in the marketplace. The micro-marketing function within an entity is commonly referred to as marketing management. Marketing managers strive to get their organizations to anticipate and accurately determine the needs and wants of customer groups. Afterward they seek to respond effectively with a flow of need-satisfying goods and services. They are typically charged with planning, implementing, and then measuring the effectiveness of all marketing activities.

The conduct of this research was anchored on the subsequent paradigm (see next page).

**FIGURE 1:** Research Paradigm



## OBJECTIVES OF THE STUDY

This study intended at evaluating the ambulant-micro business entrepreneurs in Bayombong, Nueva Vizcaya in terms of business skills and practices and business attitudes and behaviors; and guided on identifying some factors and problems encountered in the conduct of their business activities.

Specifically, this study used scientific investigation on the following problems:

1. How are the respondents can be classified in terms of their (a) business skills and practices; and (b) business attitudes and behaviors?
2. Do the respondents' business skills and practices relate significantly with their business attitudes and behaviors?

## **METHODOLOGY**

The study had used descriptive-survey method of research. The main research-instrument was questionnaire, designed to elicit information on the profile of the respondents' overall business status. Descriptive research is purposely to give qualitative explain explanation on research variables. In this study, the aforementioned respondents' profiles were explained using descriptive statistics. Hence, components in evaluating ambulant-micro business entrepreneurs were also qualitatively discussed.

The study considered Bayombong, center town of the province of Nueva Vizcaya, as the main research-setting since it is regarded to have the biggest agricultural land and said to be a melting pot of several ethnic groups – which is dominated by the Ilocanos, some Tagalogs, Gaddangs, Ifugaos and other tribal groups that reside in the its 15 Barangays.

Under several administrations, Bayombong has kept its municipal market at Barangay Don Domingo Madella and maintained a strategic schedule for its market days as Monday-Wednesday-Friday where products and goods from highlands converge in the said pot for buy-and-selling purposes.

In early 2000, when the former Mayor Hon. Atty. John Severino Bagasao regain its post from the late Hon. Mayor Elpidio Dulay, his come-back was highlighted by the construction of a “Talipapa” or “Night Market” – just in front of the Municipal Hall and adjacent the St. Dominic Church in Dumlao Blvd. (now also called ay Bay-Walk).

Although may had misunderstood to be an act of offsetting the efforts of the previous administration, since it was then that the public market in Don Domingo Madella was fully refurbished – however, in one way or the other both has given opportunities small vendors – which until now are enjoying roaming around in selling their own products/goods.

One of the basic instruments is to elicit data gathering, the profile of the respondents, number two is the level of implementation of the code of ethics; and number three is the level of effectiveness of the code of ethics implementation and number four is to elicit the data about the degree of seriousness of problems in the code of ethics implementation by the police of Bayombong, Nueva Vizcaya. All of which were observed during the conduct of the study.

The respondents of the study were purposively chosen, which totaled to 60 small-scaled vendors around the town, most of them are men (39 males and 21 females). Interview was also

done at the time the researchers visit the place. This had supplemented the instrument in gathering the data.

These ambulant vendors were those that were seen near school and campus parameters (side-walks), those that were spotted at the public market, and some from those who were located in the Night Market (Talipapa), and other nearby locations in the poblacion. Each respondent was asked and requested to give their insights on their type of business based on the components included in the questionnaire-checklist. There are more married, female, and married female respondents. The average age of the respondents is 33.75, slightly higher in female than males. The mean number respondents' family member is 5.81 or 5 to 6 people. Majority of the respondents are college graduates, and most of them are street food vendors.

In order to collect pertinent information regarding the main components being evaluated among the ambulant-micro business entrepreneurs, a survey-questionnaire was formulated by the researchers which was primarily drafted from the related literatures and studies included in the background and framework of the study.

The questionnaire-checklist was subdivided into two (2) parts: (a) Part 1 – which included the information on respondents' profile variables, (b) Part 2 – was focused on the components for the Ambulant-Business Practices, Sources and Problems. Part two of the questionnaire was further categorized into five (5) subparts, which were considered in this study as the components to describe the marketing conditions of the ambulant vendors. The following were the said subparts: sources and amount of funds; business skills and practices; business attitude and behaviors; factors affecting the business; and problems encountered.

Each component in the second part of the survey-questionnaire was given specific item-determinants as to give clear explanations for the said concepts. A letter head was included asking approval from the target respondents in gathering data. Moreover, each question/item included in the said questionnaire was properly translated in Filipino for better understanding among the respondents and thus bringing more accurate and complete information.

After deciding on which components to be included in evaluating the ambulant-micro business, the researchers through the aid of their research adviser/instructor have formulated a survey-questionnaire, which was checked carefully by the latter and was approved by the research director.

Letters of approval were also made along with the said survey-questionnaire, which were duly noted by the adviser/instructor and/or research director. Floating of questionnaires was scheduled by the student-researchers based on the common vacant time. The questionnaires were given to selected respondents who were given further instructions based on the main purpose of the study.

The questionnaires were immediately collected just after every respondent was done answering it with the promise to treat collected data based on the ethical principles of research. Supplemental interviews were also made as to verify data given by the respondents. Each an-

swered survey-questionnaire was decoded and properly tallied for tabular presentation, discussion and analysis.

For each of the selected demographic-profile of the respondents, frequency, percentage and mean computations were used to discuss each qualitative finding. Also, the same statistical tools were used in eliciting the information on the evaluated components of the ambulant-micro business.

For measurement of the interrelationships between and among the identified components of ambulant-micro business, Pearson – r Correlation Coefficient and test for Regression were considered as the best statistical treatments for the said purpose.

## RESULTS AND DISCUSSIONS

### A. Business Skills and Practices

There are several areas that included in evaluating the skills and practices of the respondents of handling their ambulant business. One of which is vitally discussed in table 5, showing information on the respondents' strategic use of time and several styles to maintain their business.

**TABLE 1.** Respondents' Business Skills and Practices along Time and Styles (Scheduled Time, Using Ledger, and Making Inventory) in terms of Sex

| Sex                                            | Male |       | Female |       | Total |        |
|------------------------------------------------|------|-------|--------|-------|-------|--------|
| Indicators                                     | F    | %     | F      | %     | F     | %      |
| A.Scheduled/Planned Time (Opening and Closing) |      |       |        |       |       |        |
| Yes                                            | 10   | 16.67 | 9      | 15.00 | 19    | 31.67  |
| No                                             | 11   | 18.33 | 30     | 50.00 | 41    | 68.33  |
| Total                                          | 21   | 35.00 | 39     | 65.00 | 60    | 100.00 |
| B.Using Ledger/Notebook                        |      |       |        |       |       |        |
| Yes                                            | 16   | 26.67 | 27     | 45.00 | 43    | 71.67  |
| No                                             | 5    | 8.33  | 12     | 20.00 | 17    | 28.83  |
| Total                                          | 21   | 35.00 | 39     | 65.00 | 60    | 100.00 |
| C.Making Inventory                             |      |       |        |       |       |        |
| Yes                                            | 13   | 21.67 | 27     | 45.00 | 40    | 66.67  |
| No                                             | 8    | 13.33 | 12     | 20.00 | 20    | 33.33  |
| Total                                          | 21   | 35.00 | 39     | 65.00 | 60    | 100.00 |

With regards to the time and styles used by the ambulant vendors as describe their business skills and practices along with the indicators of: (a) following scheduled/planned time in opening and closing the business in a day, (b) using a ledger/notebook to record sales, and (c)

making inventories before and during closing of the business in a day; table 10 summarizes the quantitative data based on the responses of the respondents.

For scheduled and/or planned time for both opening and closing the respondents' ambulant business, majority of them do not follow patterns in terms of time allotment in opening and closing sessions which counted to 41 (68.83%) where 30 are females and 11 male respondents. This means that ambulant business as displayed by the target respondents do not necessarily be religious in terms of scheduled time for business activities. In summary, 76.92% of the total female respondents do not favor the idea of having a scheduled time in opening/closing their business.

Meanwhile, 71.67% of the total respondents are using ledger or notebook in noting the details of their daily sales – this includes 16 males and 27 females. Within the female population, 69.23% of them do use notebooks in recording sales, which is considerably lower as to the percentage of the males within their population, computed as 76.19%. This implies that male ambulant vendors are more vivid in terms of documenting their daily sales compared to the females.

For developing daily inventories before and during closing period of the ambulant business, an overall total of 40 (67.67%) respondents agreed on the said purpose comprising of 27 females and 13 males. This time, males showed lower sense of valuing such activity in their business scaled the total percentage of 61.91% from the male population compared to the females of 69.23% within their population.

Next component of the respondents' business skills and practices is significantly discussed in table 2 – focusing on the indicators: (d) computing daily profit over the daily expenses, (e) listing items before purchasing things/products/goods needed in the business, and (f) saving amount to maintain the business.



**TABLE 2.** Respondents' Business Skills and Practices along Time and Styles (Computing Daily Profit, Listing Items, and Savings) in terms of Sex

| <b>Sex</b>                      | <b>Male</b> |          | <b>Female</b> |          | <b>Total</b> |          |
|---------------------------------|-------------|----------|---------------|----------|--------------|----------|
| <b>Indicators</b>               | <b>F</b>    | <b>%</b> | <b>F</b>      | <b>%</b> | <b>F</b>     | <b>%</b> |
| <b>A.Computing Daily Profit</b> |             |          |               |          |              |          |
| <i>Yes</i>                      | 14          | 23.33    | 28            | 46.67    | 42           | 70.00    |
| <i>No</i>                       | 7           | 11.67    | 11            | 18.33    | 18           | 30.00    |
|                                 | 21          | 35.00    |               | 65.00    |              | 100.00   |
| <i>Total</i>                    |             |          | 39            |          | 60           |          |
| <b>B.Listing Items</b>          |             |          |               |          |              |          |
| <i>Yes</i>                      | 17          | 28.33    | 26            | 43.33    | 43           | 71.67    |
| <i>No</i>                       | 4           | 6.67     | 13            | 21.67    | 17           | 28.33    |
|                                 | 21          | 35.00    |               | 65.00    | 60           | 100.00   |
| <i>Total</i>                    |             |          | 39            |          |              |          |
| <b>C.Savings</b>                |             |          |               |          |              |          |
| <i>Yes</i>                      | 9           | 15.00    | 10            | 16.67    | 19           | 31.67    |
| <i>No</i>                       | 12          | 20.00    | 29            | 48.33    | 41           | 68.33    |
| <i>Total</i>                    | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |

As a business style of computing daily profit, table 2 manifests that 70% of the overall respondents are performing the said style. This encompasses 28 females and 14 males. Within each sex population, females computed a higher percentage proportion of 71.80% over the males of 66. 67%.

On the other hand, there are about 71.67% of the total respondents that make daily lists of items to be purchased for their ambulant business. The figure includes 26 females and 17 males. Apparently, males have higher percentage proportion of 80.95% within their total frequency as compared to the females that computed only for 66.67% with their own population. This could mean that males have greater number of things/products/goods being sold in their ambulant business.

Last indicator is focused on the daily saving each ambulant vendor would had practicing as a business style purposely to maintain their source of livelihood-income. For this, there are only 19 respondents that save some amount (using bank account or not). This comprises 10 females and 9 males, which gave greater percentage proportion among the males computed as 42.86% (with the male population) than 25.64% within the population of the female respondents. Conversely, 41 (29 females, 12 males) of the respondents are not saving. This showed 74.36% percentage proportion within the female numbers and 57.14% for within male population. This means then that males considerably have higher sense of maintain the business through practicing daily savings.

**TABLE 3.** Respondents' Business Skills and Practices along Frequency in Purchasing and Selling, and Usual Location of the Business in terms of Sex

| <b>Sex</b>                               | <b>Male</b> |          | <b>Female</b> |          | <b>Total</b> |          |
|------------------------------------------|-------------|----------|---------------|----------|--------------|----------|
| <b>Variables</b>                         | <b>F</b>    | <b>%</b> | <b>F</b>      | <b>%</b> | <b>F</b>     | <b>%</b> |
| <b>A. Frequency in Purchasing</b>        |             |          |               |          |              |          |
| <i>Daily</i>                             | 11          | 18.33    | 8             | 13.33    | 19           | 31.67    |
| <i>Twice a Week</i>                      | 3           | 5.00     | 17            | 28.33    | 20           | 33.33    |
| <i>Weekly</i>                            | 3           | 5.00     | 11            | 18.33    | 14           | 23.33    |
| <i>Twice a Month</i>                     | 4           | 6.67     | 3             | 5.00     | 7            | 11.67    |
| <i>Total</i>                             | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |
| <b>B. Frequency in Selling</b>           |             |          |               |          |              |          |
| <i>Daily</i>                             | 7           | 11.67    | 12            | 20.00    | 19           | 31.67    |
| <i>Twice a Week</i>                      | 8           | 13.33    | 18            | 30.00    | 26           | 43.33    |
| <i>Weekly</i>                            | 4           | 6.67     | 6             | 10.00    | 10           | 16.67    |
| <i>Twice a Month</i>                     | 2           | 3.33     | 3             | 5.00     | 5            | 8.33     |
| <i>Total</i>                             | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |
| <b>C. Usual Location of the Business</b> |             |          |               |          |              |          |
| <i>Market</i>                            | 3           | 5.00     | 12            | 20.00    | 15           | 25.00    |
| <i>In front/Near the Church</i>          | 13          | 21.67    | 19            | 31.67    | 32           | 53.33    |
| <i>In front/Near the School</i>          | 1           | 1.67     | 6             | 10.00    | 7            | 11.67    |
| <i>House to House</i>                    | 6           | 10.00    | 2             | 3.33     | 8            | 13.33    |
| <i>Total</i>                             | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |

As gleaned in table 3, in terms of the respondents frequency of purchasing things, products and/or goods for their ambulant business, majority of the respondents are doing it twice a week having the frequency of 20 (17 females, 3 males). In terms of the frequency of selling, majority of the respondents are doing it twice in a week with the total of 26 (18 female and 8 males).

Ambulant business may or may not have a permanent business location for almost ambulant vendors, who do not pay rental for the said purpose. Upon evaluation on the usual location of the business, table 3 shows that there are 32 counts of respondents (19 females, 13 males) can be located in front/near the church premises; a total of 15 vendors (12 females, 3 males) usually be found in the market; 8 other respondents (2 females, 6 males) would rather do house to house for their ambulant business; and 7 of the respondents (6 females and 1 males) sell in front/near the school areas.

Connecting the information derived in table 3, Watson in 2004 had postulated the different elements of a company's marketing mix, which can be divided into four basic decision areas—known as the "four Ps": product, place, promotion, and price—which marketing managers can use to devise an overall marketing strategy for a product or group of goods. These four decision groups represent all of the variables that a company can control. Although not necessarily part of the main components of the ongoing study, the 4 P's identified by Watson can

deem play equal functions with the enumerated indicators for the financial aspect of the ambulant business, business skills and practices, and business attitudes and behaviours.

Still valuable to the ongoing study, Coleman in 2013 has regarded considerations about place, which actually getting the good or service to the target market at the right time and in the proper quantity. Strategies related to place may utilize middlemen and facilitators with expertise in joining buyers and sellers, and they may also encompass various distribution channels, including retail, wholesale, catalogue, and others. Although it is not evidently pertaining to the ongoing study's variable on the usual location of the ambulant vendors, Coleman's discussion could also vindicate the importance of selecting the said variable in assessing the overall condition of the ambulant business, benchmarking on those that he pointed out on market's place.

## B. Business Attitudes and Behaviors

The study had also included components of ambulant vendors' business attitudes and behaviours which quantitative data are shown in table 4.

**TABLE 4.** Respondents' Business Attitudes and Behaviours along Motivation and Characteristics in terms of Sex

| Sex                                   | Male |       | Female |       | Total |        |
|---------------------------------------|------|-------|--------|-------|-------|--------|
| Indicators                            | F    | %     | F      | %     | F     | %      |
| A.Motivation                          |      |       |        |       |       |        |
| <i>Profit</i>                         | 15   | 25.00 | 32     | 53.33 | 47    | 78.33  |
| <i>Customer</i>                       | 6    | 10.00 | 7      | 11.67 | 13    | 21.67  |
| <i>Total</i>                          | 21   | 35.00 | 39     | 65.00 | 60    | 100.00 |
| B.Characteristics                     |      |       |        |       |       |        |
| <i>Patience</i>                       | 18   | 30.00 | 26     | 43.33 | 44    | 73.33  |
| <i>Hardworking</i>                    | 18   | 30.00 | 34     | 56.67 | 52    | 86.67  |
| <i>Perseverance</i>                   | 11   | 18.33 | 10     | 16.67 | 21    | 35.00  |
| <i>Strong Body</i>                    | 4    | 6.67  | 16     | 23.88 | 20    | 33.33  |
| <i>Humble</i>                         | 6    | 10.00 | 19     | 31.67 | 25    | 41.67  |
| <i>Assertive</i>                      | 7    | 11.67 | 10     | 16.67 | 17    | 25.37  |
| <i>Persuasive</i>                     | 3    | 5.00  | 13     | 21.67 | 16    | 23.88  |
| <i>Good Oral Communication Skills</i> | 11   | 18.33 | 27     | 45.00 | 38    | 63.33  |
| <i>Sense of Humor</i>                 | 9    | 15.00 | 9      | 9.00  | 18    | 30.00  |
| <i>Business Knowledge</i>             | 1    | 1.67  | 8      | 13.33 | 9     | 15.00  |

As illustrated in table 4, there are 78.33 of the total respondents (32 females, 15 males) that are more motivated in terms of the profit that they can gain in their ambulant business than being motivated because of their customers. Viewing it within each females' and males' population, 71.42% of males and 82.05% of females are more profit-oriented than customer satisfaction.

Meanwhile, among the enumerated characteristics that should display by an ambulant vendor, hardworking slated the highest frequency of 52 (34 females, 18 males); a total of 44 respondents (26 females, 18 males) believe that patience should be one of the features of an ambulant vendor;

having good oral communication scored 38 respondents (27 females, 11 males); 25 of the respondents (19 females, 6 males) considered being humble; 21 respondents (10 females, 11 males) agreed for perseverance; 20 respondents (16 females, 4 males) included a strong body; having a good sense of humor counted to 18 respondents (9 females, 9 males); 17 respondents voted for being assertive (10 females, 7 males); 16 of the respondents included persuasive attributes (13 females, 3 males); and 9 other respondents believe that an ambulant vendor should be knowledgeable on the business (8 females, 1 male).

In association to the indicators presented in table 14, N. Senior (2013) reported that decisions about promotion are focused related to sales, advertising, public relations, and other activities that communicate information intended to influence consumer behavior. Another related concept was presented by E. Jerome McCarthy and William D. Perreault, Jr. in 2005; wherein they have identified eight universal macro-marketing functions that make up the economic process: 1) buying, which refers to consumers seeking and evaluating goods and services; 2) selling, which involves promoting the offering; 3) transporting, which refers to the movement of goods from one place to another; 4) storing, which involves holding goods until customers need them; 5) standardization and grading, which entails sorting products according to size and quality; 6) financing, which delivers the cash and credit needed to perform the first five functions; 7) risk taking, which involves bearing the uncertainties that are part of the marketing process; and 8) market information, which refers to the gathering, analysis, and distribution of the data necessary to execute these marketing functions.

Although do not suggestively identified as equal with the indicators presented in table 14, those marketing functions enumerated by McCarthy and Perreault – could be in one way or the other be associated to the study's indicators for ambulant business attitude and behaviors, which could be essential in acting out the said marketing functions.

### **C. Relationship between Respondents' Business Skills and Practices and their Business Attitudes and Behaviors**

**TABLE 5.** Summary on the Relationship of Respondents' Business Skills and Practices and Business Attitudes and Behaviors

| <b>Variables being correlated</b>                                     | <b><i>r-value</i></b> | <b><i>p-value</i></b> | <b><i>Decision</i></b> |
|-----------------------------------------------------------------------|-----------------------|-----------------------|------------------------|
| Business Skills and Practices versus Business Attitudes and Behaviors | 0.3026                | 0.0218                | Significant            |

As shown in table 5, a significant relationship is shown between the respondents' skills and practices in managing their business and their business manners in general. This is being intensified with the computed *r-value* of 0.3026 with the *p-value* of 0.0218, which is lesser than the significance level of 0.05. Thus, the assumption of the null hypothesis is negated on this context.

The study would suggest that respondents' way of handling their ambulant business would affect how they display their business manners, or vice versa.

Elucidating the said finding shown in table 5, Lepoutre (2012) suggested that decisions about product, place, promotion, and price will be dictated by the competitive stance that a firm assumes in its

target market. According to Michael Porter's classic book *Competitive Strategy*, the three most common competitive strategies are low-cost supplier, differentiation, and niche. Companies that adopt a low-cost supplier strategy are usually characterized by a vigorous pursuit of efficiency and cost controls. A company that manufactures a low-tech or commodity product, such as wood paneling, would likely adopt this approach. Although Lepoutre's concept is focused more among companies, some of the business processes he had highlighted would be associated to any of the respondents' business skills and practices and business attitudes and behaviours.

## **CONCLUSIONS**

Based on the significant findings of the study, the following are essentially suggested by the researchers.

1. Majority of the respondents do not follow specific time for opening and closing their daily business operations and do not save some amount from their daily profit. Although most of them perform other indicators installed for business skills and practices. Males showed higher percentage proportion for the indicators: having ledger/notebook for daily inventory, computing profit, listing items for purchase, saving amount per day.
2. Majority of the respondents are profit-oriented than being more motivated with customer satisfaction, where males showed higher incidence percentage than females. Overall, respondents claimed that hardworking and being patient are the most significant characteristics for ambulant business.
3. Respondents' business skills and practices are greatly associated with their business attitudes and behaviors. Thus, how an ambulant entrepreneur carries his behavior in the pursuit of his/her business routines would be used to describe his/her business handling techniques.

## **RECOMMENDATIONS**

As the most valuable part of this study, the following suggestions were drawn from the significant findings of the study.

1. Ambulant vendors may give priorities on the following aspects of the ambulant business as to maintain and sustain its business operations:
  - Financial Capacity and/or Constraints that is vital for the overall generation of the business.
  - Contributory factors as to support from then family and/or significant others – to be able solicit profitable sources of funds for the business.
  - Would have a planned time to follow in their business operations.
  - Should consider savings amount even at the smallest possible amount, not necessarily in a daily basis.

- May consider other marketing and management strategies (though may not hold formal setting) like promotions to increase market value of the business.

2. The Local Government Unit of Bayombong, or in Nueva VizcayaVizcaya as a whole, they should set programs that entail the welfare of these types of small-scaled businesses. Though, many/some would not properly sharing taxes for that matter, the government can benchmark on the findings of this study as to how to generate policies and guidelines that may profitably manage the ambulant-micro business. In this way, both can sustain economic stability.

3. The academe (especially HEI's), which offers School of Business Education, Business Education may consider the benefits they can gain from the findings of the study. The Business parlance for that matter can start looking into higher level of conducting similar researches that shall give implication to the business as its end-results (which is not part of the limitations of this study). Business students can dwell on which type of the ambulant business is at par in the market setting as to draw framework for their future feasibility studies and researches – and even setting their own businesses in the future. The school can re-strengthen their linkage with the community by setting plans on how to conduct their community and extension programs based on the findings of this study.

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# INHABITANT'S SATISFACTION TOWARD SUSTAINABLE DEVELOPMENT IN UNIVERSITY

by

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## ABSTRACT

The natural resources have been consumed greater and greater; thus, human must preserve resources and ecosystem as well as inhabitant's well-beings and satisfaction. This research aims to explore the effects of environment, economic and social sustainable development and on livability quality and inhabitant's satisfaction. The study proceeded with the total of 316 samples of students, alumni, staff, and faculty member on the campus in one of the largest universities in Thailand. The result indicated total effect on perceived social quality to perceived livability quality was the highest, followed with perceived environment quality to perceived livability quality. Lastly, perceived livability quality has high total effect on inhabitant's satisfaction. Understanding livability led to inhabitant's satisfaction which can generate growth of population spending and other financial benefits. Results from University context also shed the light to real estate developers the importance of livability quality of the space or settlement provided for inhabitants and customers while investing in sustainable development.

**KEY WORDS:** Sustainability, Livability, Quality of life, Campus, Thailand



## INTRODUCTION

Climate change has been a global issue since the Rio Summit in 1992. At the summit, sustainability awareness was raised, thus spawning a worldwide movement. Most large-scale implementation locations, like cities, adopt sustainability. It is possible, however, for institutions to combat sustainable development. It is undeniable sustainable environment and ecosystem are crucial to humans and other living organisms. Each human activity consumes capital in exchange for maximizing output (Bizikova, 2012; Vlek and Steg, 2007). The growth of human activities and population translates into the growth of capital required to sustain the population. Human activities such as mining, deforestation, and other socio-economic activities undoubtedly consume resources to support both short-term and long-term needs and affect the equilibrium of the ecosystem, thus it is against the concept of sustainable development (Bizikova, 2012; Msengi et al., 2019; Shi, Han, Yang, and Gao, 2019; Vlek and Steg, 2007), thus exploring sustainable development while concurrently monitoring the livability and inhabitant's satisfaction allow human to maintain equilibrium.

Universities have long focused on sustainability, but they are unable to avoid it. Beringer, Wright, and Malone (2008) stated it was undeniable that sustainability posed an important issue. As an institution, universities focus their studies on sustainability further and given their commitment to the integration of sustainability. The commitments are through educational approach, university campus atmosphere, and ecosystem management (Davis and Wolski, 2009). A university campus is a miniature city due to the enormous population size and complex activities that it hosts. With the local population, the question of the habitable environment arises (Alshuwaikhat and Abubakar, 2008). Furthermore, the university, as a real estate entity, provides educational and non-educational services in exchange for fees and employs academic and staff personnel. For an organization to survive, it must earn a profit; hence, students and university personnel are merely consumers and employees, respectively (Dalati and Al Hamwi, 2016; Douglas, Douglas, and Barnes, 2006). When consumers are involved, customer satisfaction is unavoidable (Oliver, 1980). Sustainable development implementations are promoted in many ways (United Nations, 1987, 2015); however, each aspect of implementation in different locations does not necessarily incorporate human satisfaction; thus, sustainable development with good livability and satisfaction is the importance of this study.

Purpose of the study was to explore inhabitant's satisfaction toward sustainable development in real estate by assessing inhabitant's perspective on livability using a university in Thailand as a representative. The original idea of sustainable development has been expressed by three dimensions: Environment, Economic, and Social. Each dimension represents its unique definition based on studies, such as Adomssent, Godemann, and Michelsen (2008); European University Association (2018); Nakamura and Managi (2020); United Nations (2015). Research frameworks are contained within real estate sustainable development since this study seeks opportunities and provides insights for real estate developers and investors. Further discussion will clarify how livability is related to sustainabil-

ity and satisfaction, and how sustainability is impossible without livability and inhabitant's satisfaction.

## **LITERATURE REVIEW**

Through the Rio summit in 1992, which yielded "Agenda 21" and the University of Luneburg, sustainability has been linked with universities and their campuses (Adomssent et al., 2008). Sustainable university remains vast with different forms and implementation processes considering research paradigm, design, research processes and experimental framework, theoretical foundation and conceptual foundations, theory-building, and achievable goals (Beringer et al., 2008). Nonetheless, the theoretical foundation and theory-building of sustainability in higher education remain critical but demeaned aspects (Wright, 2007).

### **Sustainable Development, Theory, and SDGs**

The sustainable development concept emerged from the combined words, "sustainable" and "development". Lélé (1991) stated it is a form of societal change that, in addition to traditional developmental objectives, has the objective or constraint of ecological sustainability". Both sustainability and development contain theories that were supported and explain the originality and how the concept began. Sustainability concepts orbited around humans and nature. Ben-Eli (2018) saw sustainability as the process of maintaining equipoise between human and environmental resources. Population must develop without producing permanent degenerating impacts on the environment. Thomas (2015) further stated sustainability brought the idea which keened on satisfying human needs and wants while monitoring necessary resource consumption from overspending them.

Sustainable Development Goals (SDGs) is a concrete framework compiled by 193 countries to ensure social cohesion, economic prosperity, and protection of the environment. Adopted in 2015, United Nations has agendas aimed to eliminate financial inequality, such as poverty, and provide environmental protection to society, and empower prosperity to the society as a part of the United Nations sustainable development plan (United Nations, 2015).

SDGs were developed further from the Three Pillars of Sustainability: environment, economic, and social. SDGs were not a mandatory framework which every country has to follow; however, the broad idea United Nations established present guideline to Three Pillars of Sustainability. The purpose of targets and indicators is to provide clear guidelines that serve as a directory implied to the vision of modernization. Though, targets may not suitable and require adjustment based on the country's vision and plan in different levels of the city (United Nations, 2015).

### **Livability of Residence and Theory**

Lynch (1984) introduced good settlement as spatial space humans inhabit with a responsive reaction to human interaction and connects human values altogether. Lynch (1984) integrated normative theory which represents the connection between how a city operates and the city's goodness, thus making good settlement the main concern for understanding and achieving livability and livable places.

Fundamental needs were developed by Abraham Maslow's research on human needs as a referred to the first criterion in Lynch's theory (Lynch, 1984). "It refers to the person's desire for self-fulfillment, namely, to the tendency for him to become actualized in what he is potential" (Maslow, 1943). Maslow (1943) believed that it is the feeling of people striving for a better life when they live in better and more livable communities. When one level of human desire is fulfilled, a higher order of needs greater than physiological hunger emerges.

Both studies illustrated fundamental aspects of human livability. Each real estate stakeholder is responsible for the inhabitant's health and well-being and, ultimately, lifestyle. Maslow (1943) indicated the range of required basic human needs to the highest order of human needs of inhabitants. Furthermore, sustainable development implementation is intended to maximize output from resources spent and monitor resources concurrently while livability monitored inhabitant's basic and higher-order needs. The integration between two concepts: sustainable development and livability, would best represent harmonic affinities within the area; thus, the proposed framework adopted this idea as a part of the study.

### **Human Satisfaction Theory**

Martilla and James (1977) proposed that satisfaction is defined as the degree to which customer evaluations of the importance and performance of products and services are based on perception. Fishbein and Ajzen (1977) studied the process of satisfaction, which further indicated key factors of the process were attribute importance and human values. The process is now the expectancy-value model. Furthermore, product and service satisfaction or dissatisfaction levels from humans are reflected greatly in products and service characteristics and the importance of customer perceived characteristics (Barsky, 1992). This implied that customers recollect their beliefs and experiences to evaluate satisfaction. Level of satisfaction will be based on the degree of their beliefs and their expectations (Barsky, 1992).

Although the importance and performance model often question product and service's importance and performance directly, this research utilized the model's principle. Since the university's implemented dimensions of sustainable development often did not take student's perspectives and expectations into account, the performance of attributes does not reflect upon student satisfaction and expectations. Thus, neglecting livability contradicted

applied theory such as the Expectancy-value model and Expectancy-Disconfirmation paradigm directly.

## **Measuring Variables**

### ***Perception on Environmental Quality***

Perceived environment quality was defined as quality of surrounding physical dimensions such as Green and public space, pollution, cleanliness, energy, and waste management under consideration of the purpose of use (Alshuwaikhat and Abubakar, 2008; Jome'epour, Motiee Langerudi, Hajihosseini, and Salami Beirami, 2018). Environment quality incorporates environmental sustainability factors to support human life (Berke and Conroy, 2000). Waste generated from resource consumption must not exceed the ability to eliminate by any means, and the amount of waste generated must assimilate nature (Mensah and Casadevall, 2019). Most research on the environmental dimensions emphasizes the natural environment of communities, such as the quantity and quality of recreational areas and green spaces. Other factors which impact the surrounding environment, such as noise and air pollution, trash management, as well as man-made structure often were neglected. Landry (2012) incorporated pollution, waste, and space factors to identify the effect on living conditions. As a result, the factors affect inhabitant's lifestyle and the elements of cities and their surrounding land.

### ***Perception on Economic Quality***

Perceived economic quality was defined as quality of dimensions such as cost of living, infrastructure, and transportation, and accessibility under consideration of the purpose of use (Alavizadeh, Kiumars, Ebrahimi, and Alipour, 2019; Alshuwaikhat and Abubakar, 2008; Türksever and Atalik, 2001). The economic dimension, in terms of sustainability, indicates the idea of fulfilling the societal economic needs, maximizing yield to achieve a higher living needs specification with the constraints of meeting capital equilibrium (Iniesta-Bonillo, Sánchez-Fernández, and Jiménez-Castillo, 2016); however, economic development does not operate effectively from the capital it consumed and tend to deplete and degrade natural capital instead. Public-supported ecological plans can encourage technological innovations to enhance resource consumption in the production process and energy efficiency whilst protecting the environment simultaneously (Porter and Van der Linde, 1995). Infrastructure is required to support activities not only for educational purposes but for other everyday activities as well, such as commuting, dining, exercising, and more.

### ***Perception on Social Quality***

Perceived social quality was defined as quality of dimensions such as community services (public leisure), low levels of criminality, and safety measures under consideration of the purpose of use (Alshuwaikhat and Abubakar, 2008; Leby and Hashim, 2010). In sustainability, Msengi et al. (2019) and Basiago (1998) stated societal sustainability includes so-

cial equality, justice, safety, security, sustainable urban form and mode of production, and energy policies such as promotion of clean energy, reduce waste generated and litter in the settlement, and reuse and recycle products. Based on study by Jerome and Maslow's hierarchy of needs (Jerome, 2013; Maslow, 1943), second-order needs were safety needs even in organization. Worker cannot proceed through social interaction without fulfilling the fundamental needs (Jerome, 2013). Humans have a desire to live without having to be paranoid about life-threatening situations which excessive crime rate in the settlement imparts fear and worry among inhabitants. Savasdisara (1988) stated safety and security are key factors affecting satisfaction with living conditions in Japan. Other aspects of social sustainability and livability are societal stability, social interaction, basic health, and needs (Basiago, 1998; Liang, Liu, and Qiu, 2020).

### ***Perceived Livability Quality***

Livability refers to the aspects that improve the quality of life. Increasing the quality of life will also affect lifestyle and health conditions, and the sustainability of the built environment will increase (Shamsuddin, Hassan, and Bilyamin, 2012). Tang, Ruth, He, and Mirzaee (2017) further constructed a comprehensive evaluation system for and these relationships should always be considered to prevent them being one-dimensional and mimetic (Khorasani, Molaei Ghelichi, and Rezvani, 2015).

In this context, perceived livability quality represents a subjective matter. The term subjective often involves unstable, emotional, and debatable matters compared to the objective, which is associated with scientific terms, safety, reassuring and more. This implicit assumption may lead to the misconception that subjective dimensions cannot be described by scientific terms. Appropriate subjective indicators evaluate the perceptive and affective aspects of well-being (Conigliaro, 2017).

Each dimension refers to concepts that are not straightforward. It is difficult to classify an indicator as a determinant or as an effect of well-being (Maggino, 2015). For these reasons, attention focuses on interrelation, rather than the root cause of dimensions themselves, which lead to two subjective well-being characteristics linked collectively: the allocating of well-being among subjects (equity dimension) and the potential to maintain in the future at least today's level of well-being (sustainability). Thus, it is irrelevant to consider the development of sustainability while ignoring livability (Conigliaro, 2017). Perceived livability quality was defined as subjective assessment of living situation affects by three sustainable development aspects which fulfill individual purposes and needs (Jome'epour et al., 2018; Newman, 1999; Woodruff, 1997).

### ***Inhabitant's Satisfaction***

Satisfaction comes from the disconfirmation of a consumer's product and service and consumer's expectations (Chen, 2013; Oliver, 1980). The concept describes the evaluative judgments of products and services which are important for usage evaluation. Overall, sat-

isfaction is explained by customer's feelings toward products and services in response to the evaluation of user experiences. Human satisfaction emergent can be explained by customer value hierarchy.

Woodruff (1997) and Churchill and Surprenant (1982) stated customer value hierarchy begins with preconceived desire value. Consumer feedback initiated the value assessment process. The consumer's value judgments come from comparison of experiences before and after they make a purchase. Using attributes, attribute performances, and consequences will produce better and broader consumer perceptions. Lastly, inhabitant's satisfaction was defined as subjective evaluation of inhabitant's resource consumption and consumer's past and present experience from both exogenous and endogenous relationships (Nakamura and Managi, 2020; Westbrook and Reilly, 1983; Woodruff, 1997).

### **The Interconnection among variables**

#### ***Three Sustainable Development Qualities to Livability Quality***

Environment quality incorporated environmental sustainability factors such as air and noise pollution and their sources, waste and sewage management, energy consumption, and surrounding green and non-green type space (Gulwadi, Mishchenko, Hallowell, Alves, and Kennedy, 2019; Jome'epour et al., 2018). Landry (2012) stated pollution, waste, and surrounding space affect inhabitant's lifestyle and the element of cities and their surrounded land. Many individuals and groups invested efforts to improve green areas and attempted to reduce pollutions which alternately improved air quality. The area, then, is more habitable without pollution; therefore, quality of environment affects livability quality (Alshuwaikhat and Abubakar, 2008; Martínez-Bravo, Martínez-del-Río, and Antolín-López, 2019; Türksever and Atalik, 2001).

In real estate which focuses on inhabitant's well-being and students' perspective are taken into consideration, employment and income are not major issues (Alshuwaikhat and Abubakar, 2008). Staffs and faculty members, an employee of the institution, they received a salary as financial benefits and other welfare which student was excluded. Nonetheless, while staying on campus, staff and faculty members still consume resources, commute, do tasks and activities, same as consumer, thus standard of living, cost of living and the residential unit remained applicable. Even though Santos and Martins (2007) classified transportation and facilities as collective material dimensions, the authors only separate collective material and economic dimensions by financial activities related to inhabitants individually only. Jome'epour et al. (2018) generalized and integrated both dimensions while analyzing the standards of living of community members. Thus, these factors contribute to the inhabitant, which directly influences livability quality.

Berke and Conroy (2000) suggested that environmental and social qualities impact urban forms and adaptation of local conditions. Urban planners must carefully evaluate these aspects to support inhabitants. Social quality is not defined by achieving every inhabitant's needs since physiological needs and psychological needs are perceived differently among

inhabitants. Rather, the implementation of dimensions enables inhabitants to realize their needs and, consequently, express their needs to responsible factions (Mensah and Casadevall, 2019). In conclusion, social interaction, community, and cultural energy, and other communal aspects may promote better livability, thus social quality affects livability quality.

### ***Three Sustainable Development Qualities to Satisfaction***

Today, there is a lack of research regarding an objective evaluation of the city regarding environment, economic, and social factors and its relationship to sustainable development, which directly affects resident satisfaction (Nakamura and Managi, 2020). The city exists for those who are actively involved in the city, and all those who obtain indirect rewards are beneficiaries. As a result, inhabitant's satisfaction, under some degree of policies to control neighborhood conditions, are essential as it reflects society living conditions (Insch, 2010; Insch and Florek, 2008; Zenker, Petersen, and Aholt, 2013). Thus, city performance in environment economic and social quality and inhabitant's satisfaction are interconnected, and, regarding their region of residence, are significant to study (Nakamura and Managi, 2020).

Ultimately, sustainable development changes can trigger subjective satisfaction toward them. Moreover, livability quality acted as a mediator toward satisfaction. These interconnections can be hypothesized as three sustainable development qualities and perceived livability qualities can positively influence inhabitant's satisfaction.

### ***Perceived Livability Quality to Satisfaction***

Satisfaction refers to the perceived disconfirmation from expectation the person has on products and services, then the performance of products and services following utilization (Oliver, 1980). The customer builds expectations before the vacation and evaluates satisfaction after the vacation (Chen and Chen, 2010). Westbrook and Reilly (1983) and Woodruff (1997) presented a customer disconfirmation-type satisfaction model and suggested a satisfaction model which can be explained as a sequence. Customers' values are determined by certain aspects, such as attributes and consequences, related to the use circumstance. Customers make judgments about product quality, whereas customers evaluate product performance. Customers decide on quality and value (Westbrook and Reilly, 1983; Woodruff, 1997). Customer evaluates satisfaction with attributes of product and service with post-experienced judgement.

Studies on quality of life are done with subjective issues. Human quality of life was rarely quantified by one-dimensional metrics such as life satisfaction and other times includes a mix of other indices (Olsen, Nicholls, and Mitchell, 2019). With a study by Nakamura and Managi (2020), the result showed subjective city evaluation indicator is positively related to satisfaction. Hence, livability influences satisfaction.

## THE METHODOLOGY

This research employed a survey conducted on the university campus in Thailand, with a questionnaire serving as the data collection medium. Samples were chosen from resident students, commuting students, and staff with experience within the chosen university for at least six months. Samples must be well-oriented with the campus's facilities. With such an assumption, samples can be assimilated to regular consumers in the city. Using unknown population formula to calculate convenient sample, the total of 240 samples were the minimum number required (Roscoe, 1964). Data collection proceeds through the survey method. Surveying was conducted using questionnaire based on a 5-point-Likert scale online.

### Structural Equation Modeling – Partial Least Square Analysis

The proposed framework is suitable to analyze with Partial least square analysis or PLS-SEM rather than regression analysis. The results in the model reflect latent variables that can be approximated and measured by a set of measurable indicators represented by the empirical concept. In addition to the amount of data, the bootstrapping method was suggested to reevaluate the model statistically numerous times. (See Appendix B for model and figures)

Analysis criteria indicated by Hair, Ringle, and Sarstedt (2013); Hair, Sarstedt, Hopkins, and Kuppelwieser (2014) are listed as follows. For measurement model evaluation, recommended standardize outer loading is 0.7 and above; however, the allowable outer loading is 0.4 since some variables play a crucial role in some studies and should not be removed. Recommended Cronbach's Alpha ranges 0.7 and above. Convergent validity with Average Variance Extract (AVE) above 0.5 is recommended (Fornell and Larcker, 1981; Hair et al., 2013). The coefficient determinant, R-Square ( $R^2$ ), determines the variance in the dependent latent variable that is explained by the independent variable(s) (Achjari, 2004). In social science research, Hair et al. (2013) also stated recommended R-Square should not be lower than 0.25. Lastly, p-value in hypothesis testing must exceed 0.05 or 5 percent.

## RESULTS

Out of all respondents, 147 were female (46.52%), 166 were male (52.53%) and 3 were others (0.95%). Most respondents were current university students and alumni, with income per month over 100,000 baht. Almost every respondent used food courts/cafeterias, public transportation, and libraries on the campus and stayed at private apartments bordered by the campus.

### Analysis Results

Total of 26 measuring variables over three independent variables and two dependent variables respectively, perceived environmental, economic, and social quality with perceived livability quality as a mediator and dependent variable and inhabitant's satisfaction as another dependent variable. Measurement model evaluation indicated outer loading test showed the majority of the loadings fall within the acceptable range of 0.4-1 (Hair, Hult,



Ringle, and Sarstedt, 2017). LIV4 received 0.393 loadings which required to be removed from the model, thus second iteration, as the final iteration, was analyzed further without LIV4.

In the final iteration, all outer loadings fell within acceptable range (0.4-0.7), no further indicator removal was required. Cronbach's Alpha test showed perceived environmental quality and perceived social quality received values lower than 0.7, which explained the indicators under perceived environmental quality and perceived social quality must be further evaluated. Average Variance Extracts in perceived environmental, economic, and social quality received values lower than 0.5; however, composite reliability values were greater than 0.7 in all latent variables. Convergent validity test was further explored through Fornell-Larcker criterion and cross loading test. Some aspects of the constructs fell below recommended but remained in acceptable range and had p-value less than 0.05, thus the indicators and constructs themselves were significant to be discussed further.

Next, the structural model assessed the relationship among latent variables. Coefficient determinant R-square value (R<sup>2</sup>) and R-square adjusted indicated how well the model's prediction is and R<sup>2</sup> adjust explain how well data point fit a curve in the model. All R<sup>2</sup> and R<sup>2</sup> adjusted were greater than 0.25; therefore, the model prediction is viable (Hair et al., 2014). The path analysis result showed that all paths or hypotheses were statistically significant except for direct relationship from perceived environmental quality to inhabitant's satisfaction. P-value was 0.113 and t-statistics was 1.769, thus hypothesis 2 was the only path that had not passed significant test. (See Appendix A)

The assessment further studied the total effects of all relationship vectors and their mediation effect. Mediation analysis reflected specific indirect effects reflected total of three specific indirect effects: perceived environmental, economic, social quality to perceived livability quality to inhabitant's satisfaction with livability quality as a mediator. Indirect path from perceived environmental quality had full mediation effect since direct path from perceived environmental quality to inhabitant's satisfaction was statistically insignificant. Other two specific indirect effects had partial mediation effect. Total effects indicated perceived social quality had the highest total effect value on perceived livability quality and perceived environmental quality affected inhabitant's satisfaction the highest.

## **CONCLUSION AND RECOMMENDATION**

This study was motivated by concerns about livability quality that is influenced by sustainable development and supported by multiple theories. This is a new concept in Thailand, however. Categories such as environmental, economic, and social dimensions must be reviewed and adapted from previous international studies. No theory to explain the proposed model meant there would be a minor amount of error and lower-powered research. Additional measuring variables or indicators could lead to a more significant result, such as improved safety and security or narrower leisure service provided at the university.

Most of the time, students spend their time on campus, where they are developed into the most experienced samples. Student academic performance may increase if the livability quality is high alongside staff and academic members' productivity. Customers in the Real

Estate industry may differ from the respondents in this study; nevertheless, some traits are common, therefore the results can be applied to the broader community. In certain circumstances, the link between consumers and sustainable growth may be deeper, for example, when financial aspects such as monthly income and costs are weighted more heavily. To compensate, developers must carefully balance investment and primary consumer advantages.

Referring to the model, the research explored subjective to subjective latent variable relationships. A study, by Nakamura and Managi (2020), explored sustainability to satisfaction via an objective-subjective relationship, which is a different approach to this study; though, objective indicators are more convenient to quantify. By examining both subjective and objective indicators, the outcome may provide a broader perspective and foster community understanding.

The study demonstrated potential implications for future use and research. Paths assigned were initially adopted from Lynch's theory and satisfaction model. Maslow's perspective indicated human needs are separated into multiple levels or hierarchies, started from fundamental, necessary needs to emotional and psychological needs (Maslow, 1943). Expectancy-value model, by Fishbein and Ajzen (1977), is supported by the outcome of statistical analysis of the model. Students, staff, and faculty members utilized their experience to generate some expectations, then further uses that expectation to evaluate livability quality. Finally, respondents can evaluate satisfaction (Barsky, 1992). The proposed model suggests that not only is sustainable development required, but also livability and satisfaction. Sustainable development elements affect livability with greater weight than satisfaction. This supports the livability theory and satisfaction model discussed above.

The current model is exploratory, but it is also supported by ideas on livable quality affected by sustainable development similar to research by Nakamura and Managi (2020). The indicators were selected from the three different dimensions of sustainable development, including the environmental, economic, and social dimensions. questions in which there were no tangible results. Minimal error and lesser statistically-based prediction error were envisaged as exploratory study with no standalone hypothesis. Additional or in-depth aspects, such as environment or social purely, can improve the model.

Although path coefficient for perceived environmental quality to inhabitant's satisfaction has statistically insignificant, perceived environmental quality affected inhabitant's satisfaction through perceived livability quality. Universities should continue to invest in sustainable development, mainly in environmental and social aspects, as it would improve livability quality and inhabitant's satisfaction. Universities should further prioritize the social quality of the inhabitant's area as it weighs the highest. Leisure services, crime rate, and inhabitant's security and safety will be the main interest according to this study, thus investing toward social quality will improve livability quality and satisfaction. (See Appendix A)

The data collection period ranges from three months since early 2021. Campus lockdown and social distancing narrowed the ability to reach respondents. Only respondents who have been given contact can be interviewed further. In normal circumstances, data collection is potentially simpler for further research. The population on campus comprises students, staff, and faculty members. Everyone is represented at the city level. While student,

staff, and faculty roles all share the same demographics, demographics such as per capita income, occupation, and level of education are different. Everyone's approach to sustainable development, livability, and satisfaction differs. Quality perceptions vary depending on prior experience and expectations. This low number of samples is the primary reason for the reduced statistical significance. more participants from the local population are necessary to serve the objective of the study.

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## APPENDIX

### Appendix A

**TABLE 1.** Results from measurement model evaluation.

| Variable                        | Items | First iteration |                  |                       |                  | Second iteration |                  |                       |                  |
|---------------------------------|-------|-----------------|------------------|-----------------------|------------------|------------------|------------------|-----------------------|------------------|
|                                 |       | Outer Loadings  | AVE <sup>a</sup> | Composite Reliability | Cronbach's Alpha | Outer Loadings   | AVE <sup>a</sup> | Composite Reliability | Cronbach's Alpha |
| Perceived Environmental Quality | EN1   | 0.550           | 0.331            | 0.744                 | 0.594            | 0.548            | 0.332            | 0.745                 | 0.594            |
|                                 | EN2   | 0.689           |                  |                       |                  | 0.685            |                  |                       |                  |
|                                 | EN3   | 0.426           |                  |                       |                  | 0.433            |                  |                       |                  |
|                                 | EN4   | 0.653           |                  |                       |                  | 0.653            |                  |                       |                  |
|                                 | EN5   | 0.543           |                  |                       |                  | 0.549            |                  |                       |                  |
|                                 | EN6   | 0.555           |                  |                       |                  | 0.553            |                  |                       |                  |
| Perceived Economic Quality      | EC1   | 0.701           | 0.463            | 0.809                 | 0.711            | 0.704            | 0.463            | 0.809                 | 0.711            |
|                                 | EC2   | 0.500           |                  |                       |                  | 0.498            |                  |                       |                  |
|                                 | EC3   | 0.744           |                  |                       |                  | 0.747            |                  |                       |                  |
|                                 | EC4   | 0.722           |                  |                       |                  | 0.717            |                  |                       |                  |
|                                 | EC5   | 0.705           |                  |                       |                  | 0.706            |                  |                       |                  |
| Perceived Social Quality        | SO1   | 0.745           | 0.416            | 0.779                 | 0.658            | 0.741            | 0.416            | 0.779                 | 0.658            |
|                                 | SO2   | 0.554           |                  |                       |                  | 0.546            |                  |                       |                  |
|                                 | SO3   | 0.644           |                  |                       |                  | 0.643            |                  |                       |                  |
|                                 | SO4   | 0.615           |                  |                       |                  | 0.622            |                  |                       |                  |
|                                 | SO5   | 0.652           |                  |                       |                  | 0.659            |                  |                       |                  |
| Perceived Livability Quality    | LIV1  | 0.782           | 0.489            | 0.820                 | 0.731            | 0.786            | 0.579            | 0.846                 | 0.757            |
|                                 | LIV2  | 0.750           |                  |                       |                  | 0.760            |                  |                       |                  |
|                                 | LIV3  | 0.765           |                  |                       |                  | 0.774            |                  |                       |                  |
|                                 | LIV4  | 0.393           |                  |                       |                  | Removed          |                  |                       |                  |
|                                 | LIV5  | 0.727           |                  |                       |                  | 0.723            |                  |                       |                  |
| Inhabitant's Satisfaction       | SAT1  | 0.709           | 0.532            | 0.850                 | 0.779            | 0.708            | 0.532            | 0.850                 | 0.779            |
|                                 | SAT2  | 0.672           |                  |                       |                  | 0.672            |                  |                       |                  |
|                                 | SAT3  | 0.754           |                  |                       |                  | 0.754            |                  |                       |                  |
|                                 | SAT4  | 0.770           |                  |                       |                  | 0.770            |                  |                       |                  |
|                                 | SAT5  | 0.737           |                  |                       |                  | 0.738            |                  |                       |                  |

Note: a. Average Variance Extracted



**TABLE 2.** Analysis results.

| Hypothesis | Relationship                                                    | Sign | Path Coefficient | T-values | P-values | Result               |
|------------|-----------------------------------------------------------------|------|------------------|----------|----------|----------------------|
| H1         | Perceived Environmental Quality -> Perceived Livability Quality | +    | 0.296            | 4.354    | 0.000*   | <b>Supported</b>     |
| H2         | Perceived Environmental Quality -> Inhabitant's Satisfaction    | +    | 0.097            | 1.586    | 0.113    | <b>Not Supported</b> |
| H3         | Perceived Economic Quality -> Perceived Livability Quality      | +    | 0.166            | 2.647    | 0.008*   | <b>Supported</b>     |
| H4         | Perceived Economic Quality -> Inhabitant's Satisfaction         | +    | 0.123            | 2.007    | 0.045*   | <b>Supported</b>     |
| H5         | Perceived Social Quality -> Perceived Livability Quality        | +    | 0.312            | 5.021    | 0.000*   | <b>Supported</b>     |
| H6         | Perceived Social Quality -> Inhabitant's Satisfaction           | +    | 0.148            | 2.326    | 0.020*   | <b>Supported</b>     |
| H7         | Perceived Livability Quality -> Inhabitant's Satisfaction       | +    | 0.443            | 6.625    | 0.000*   | <b>Supported</b>     |

Note: \*p<0.05, Hypothesis is supported.

**TABLE 3.** Mediation effects analysis.

| Indirect Relationship                                                                        | Full Mediation Effect | Partial Mediation Effect | No Effect |
|----------------------------------------------------------------------------------------------|-----------------------|--------------------------|-----------|
| Perceived Environmental Quality -> Perceived Livability Quality -> Inhabitant's Satisfaction | ✓                     |                          |           |
| Perceived Economic Quality -> Perceived Livability Quality -> Inhabitant's Satisfaction      |                       | ✓                        |           |
| Perceived Social Quality -> Perceived Livability Quality -> Inhabitant's Satisfaction        |                       | ✓                        |           |

**TABLE 4.** Total effects of relationship.

| Relationship                                                    | Direct Effect | Indirect Effect | Total Effect |
|-----------------------------------------------------------------|---------------|-----------------|--------------|
| Perceived Environmental Quality -> Perceived Livability Quality | 0.296         |                 | 0.296*       |
| Perceived Environmental Quality -> Inhabitant's Satisfaction    | 0.097         | 0.131           | 0.228*       |
| Perceived Economic Quality -> Perceived Livability Quality      | 0.166         |                 | 0.166*       |
| Perceived Economic Quality -> Inhabitant's Satisfaction         | 0.123         | 0.073           | 0.196*       |
| Perceived Social Quality -> Perceived Livability Quality        | 0.312         |                 | 0.312*       |
| Perceived Social Quality -> Inhabitant's Satisfaction           | 0.148         | 0.138           | 0.286*       |
| Perceived Livability Quality -> Inhabitant's Satisfaction       | 0.443         |                 | 0.443*       |

Note: \*p<0.05, Value is statistically insignificant.

Appendix B

FIGURE 1: Proposed model.

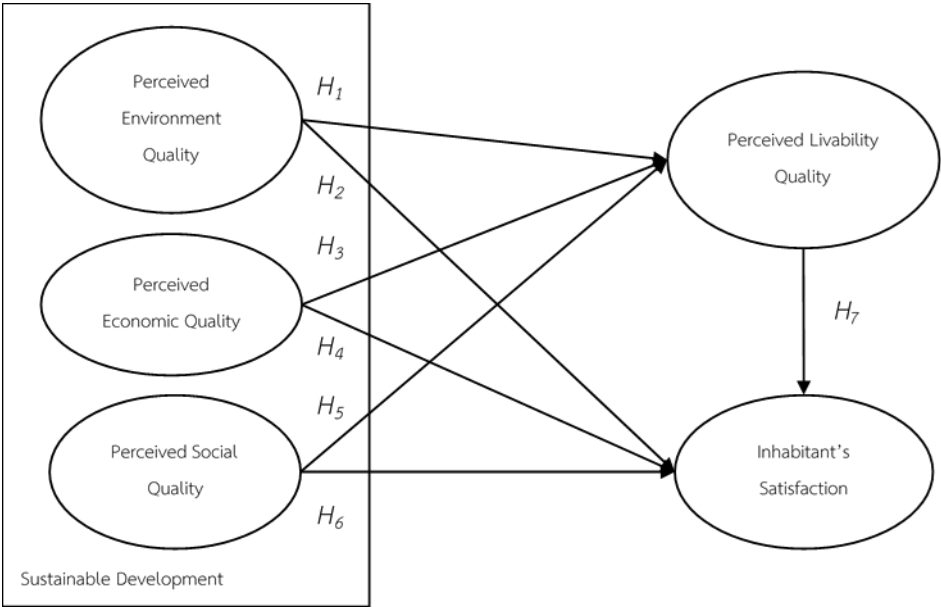


FIGURE 2: Path coefficients and P-value, and R2 from path coefficients test.

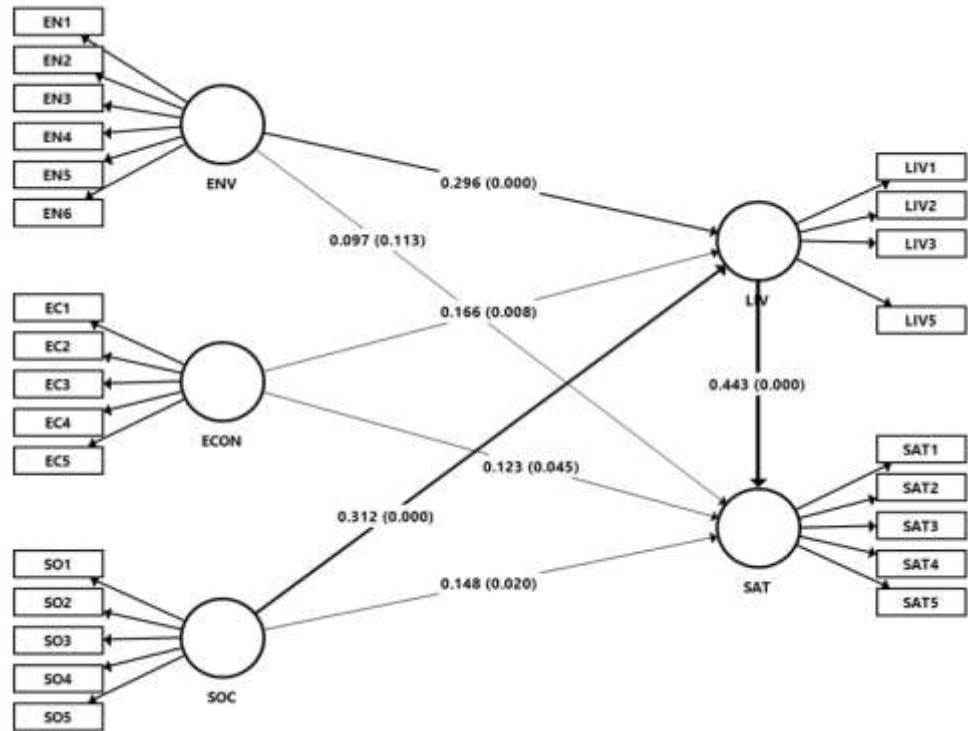
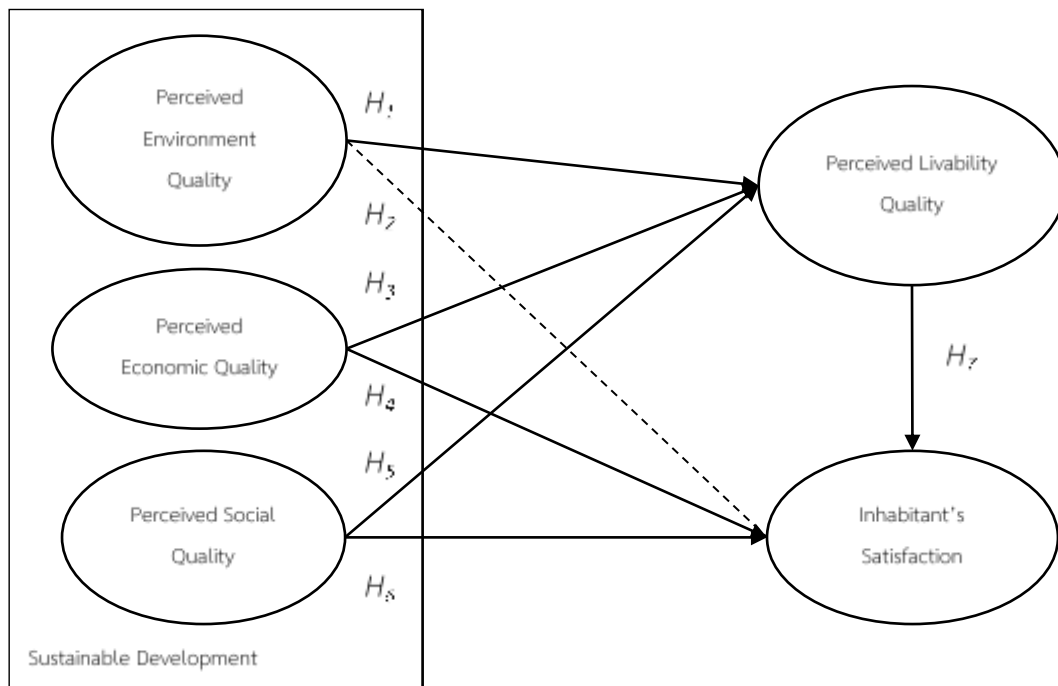


**FIGURE 3:** Result model based on hypotheses testing.



# **A COUNTER BRAND FACIAL SKINCARE MODEL OF COVID-19 EDITION**

by

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## **ABSTRACT**

The broadening of the marketing concept is essential and is showing as a fruitful in the consumer behavior literature, a plus on business is aiming to sustain their competitive advantage. Previous study has been growing interest in the customer loyalty and a third round of COVID-19 continues to affect consumers' behaviors, accordingly, this study aims to extend the customer loyalty model from a COVID-19 stimulus. A qualitative study was carried out in the exploratory phase in order to gain an insight and eliminating ideas that are not practical (Churchill, 1992; Saunders, Lewis & Thornhill, 2003). A result of an exploratory research between sellers and consumers was presenting. There is limited theoretical and empirical study which relating to the customer loyalty model in the context of counter brand facial skincare products from COVID-19 stimulus, therefore, an extending of the customer loyalty model is a pivotal of this study. A prominent of technology has been assent through social behaviors via a mobile phone as a tool to convey marketing communication to population. As such, this study will expand academics and practitioners' in a span of the customer loyalty of COVID-19 edition.

**KEY WORDS:** Customer Loyalty, COVID-19, Technology

## INTRODUCTION

A well notice of Coronavirus has been spread in a globe and it has been called as a COVID-19, this virus has been travelling around the world via a movement of individuals where effecting to human health and economic diminishing since year 2019 (UN News, 2021). COVID-19 has been impacted through a social life with rule and policy and it entails health attack, government policy, people spending and a shopping manner of people in a globe. COVID-19 is causing a changing of consumers purchasing behaviors therefore developing the customer loyalty model from COVID-19 is a pivotal of the study. Although COVID-19 employed social isolation instructions, restrictions on business opening hours, and travel constraints, the Global Skincare Products Market sales value is projected to increase at a CAGR (Compound Annual Growth Rate) of 4.69% during the forecast period 2021–2026 (Research Markets, 2021). Globe Newswire (2020) reports the CAGR of Thailand skincare products industry at 7.6% from 2021 to 2027. Specifically, Thai Prestige Cosmetics market is predictable to increase annually by 8.78% (CAGR 2021-2025) (Satista, 2020).

A prestige cosmetics or as a counter brand is showing as international brands of cosmetic products sold at premium price value. However, this study focuses only on facial skincare products therefore this study defines counter brand facial skincare products as international brands of skincare products sold at premium price and is displayed at counter displays in department stores with beauty advisors/consultants. These brands are Biotherm, Clarins, Lamer, Lancome, Shiseido, etc.

## LITERATURE REVIEW

A consumer's behavior literature in the area of the customer loyalty had been in a growing interest concept (Abu-Alhaija, Yusof, Hashim & Jaharuddin, 2018). An extending customer loyalty model and shining current marketing conceptual are a major value of the study.

### Customer Loyalty

A main driver of business value is a profit via existing customers and new customers. The loyalty knowledge is be able to transport profit to business from several of marketing strategies, in sum, the customer loyalty is a profit driver. Customer loyalty held business value of understanding behavioral consistency towards products and/or services (Oliver, 1997). The classic model of loyalty proposed by Dick and Basu (1994) argues that brand loyalty represents as one of the standards to measure a brand strength. Brand loyalty is a comprehensive reflection from a compounding of consumers' behavioral and attitudinal. Accordingly, brand loyalty conceptualizes from a complex and multidimensional concept.

Previous studies concluded the customer loyalty as an outcome of repeated purchase and positive word of mouth (Dick & Basu, 1994; Srinivasan, Anderson & Ponnabolub, 2002; Watson, Beck, Henderson & Palmatier, 2015). A robust of loyalty knowledge has been reformed in different ways and may reform from time to time. Likewise, this study will study the customer loyalty in the duration of COVID-19 in two aspects, there are a repeated purchase and a word of mouth communication.

## **Repeated Purchase**

Creating or exploring the customer loyalty through a repeated purchase is primarily recognised as one of the central goals of marketing knowledge (Kotler, 1972; Molloer, 2006). Repeated purchase is a factor that was defined as a continuing purchase products and/or services which corresponding to consumers' attitude towards that products and/or services. Customers who have a positive attitude towards their product, service and store will always seek to purchase same product and service same store and they are also likely to recommend it to their peer (Garcia, Gil-Saura & Orejuela, 2018). According to the focal purpose of this study, a repeated purchase will be studied in the construct of the customer loyalty.

## **WOM Communication**

Based on the literature reviewed, WOM is a behavior of passing information of products and/or services from consumers through their peers. WOM communication shows as a powerful of product, service and store information transmission. Its results four times more effective than print media, two times more effective than radio and four times more effective than salesperson (DeCarlo et al., 2007). In sum, word-of-mouth communication sparkles a source of product and service information among consumers which influences consumers' consuming (Grant, Clarke & Kyriazis, 2007).

A prestige cosmetics market opportunity and a lacking of an empirical research on factors influencing counter brand facial skincare customer loyalty, this study explores antecedents of counter brand facial skincare customer loyalty in order to extend a previous literature. Verifying the formation factors influencing of the customers' loyalty, an exploratory research was employed on a counter brand facial skincare products in Thailand. This exploratory research was conducted with un-structure questions to form factors influencing customer loyalty in a span of a repeat purchase and a WOM communication. COVID-19 played an influence on a forming of customer loyalty model as context mediator thus exploratory results show an impact on an academic and a business implication.

## **EXPLORATORY RESEARCH**

The exploratory research results are discussed with quality or validity of a study might be assured. A findings comparison for double checks of research results will be discussed with its comprehensive understanding phenomena. A "triangulation" has been used to increase the credibility and validity of research results in many decade from the scholars (Seale, 1999; Tracy, 2010). Triangulation is the uses of multiple data sources in qualitative research to develop comprehensive understanding of phenomena (Patton, 1999). The approach of a data triangulation is employed as a cross examination of this study in order to get more confidence in research findings.

Results of the exploratory research shapes an understanding of the marketers' perspective as well as the consumers' perspective. The qualitative research was conducted from two groups of participants; the sellers and the consumers. This study presented a discussion of the use of in-depth interview and focus groups as data source triangulation in qualitative inquiry. In-depth interviews were conducted among sellers: managers/supervisors. Person-

al interviews with five counter brand cosmetics marketers were conducted as an in-depth interview.

Fern (2001) suggests the size of the focus group participants should be at a simple of four to six participants. Accordingly, a total of five focus group interviews from office worker and business owner who were counter brand facial skincare consumers were conducted per a convenience sampling design. Number of participants in a qualitative research was directed from participants' feedback. A clear and repetitive feedback is limited number of additional participants or groups of the study. Following main questios were probed in an exploratory research in order to gain an insight of a study:

What are the key competitive issues among counter brand skincare products?

- How do consumers make their future purchases in the process based on consumers' experience?
- How do consumers make a recommendation to their friends in the process based on consumers' experience?

### **In-depth Interviews**

Sellers of the counter brand facial skincare products pined factors influencing of their consumers' purchase in five main areas. There are a product quality, brand, source of information, salepersons, and promotion.

### **Product Quality**

Sellers mentioned in three main skin problem area of their consumers. There were pimple skin, wrinkle skin and darkness skin problems. Above skin problem leads sellers to aware the key product benefit in skin enhancement from their product benefits. More impotantly, sellers stated that product development is showing as one principle of a facial skincare products quality of consumers. A new product formulation for its greater benefits or shorten benefits of a result had an influence to consumers' purchase decision. Finally, a result of product testing research which reporting a product benefit and a duration to get product benefit provided a product quality evaluation of consumers.

### **Brand**

Participants believed that a long establish and well-known brand shows a brand advantage to counter brand facial skincare products. A long establish and well-known brand produced a brand trustworthiness in consumers' perspective. Also, according to consumers encountered a counter brand facial skincare products as a brand specialist consequently counter brand facial skincare products was considered as premium price brands in consumers' standpoint.

### **Source of Information**

There were two main source of product information for business through consumers. Sellers mentioned an online communication and offline communication. The priooritize to convey marketing messagae was an online communication. An online communication was

transmitted from social network, friends and relatives while offline communication was mainly from salespersons (beauty advisors or beauty consultants). An online advertising consisted of a social media and product reviews from users in the stream of product usage and brand awareness. Above online message from users was showing as an uncontrol communication on their facebook page and Twitter. Offline communication or a communication from beauty advisors/advisors provided product information in a particular to new products. In addition to product information, services were also provided by beauty advisors/advisors, for example, admin facebook page and staff's call conversation. Therefore, beauty advisors/advisors communicated through consumers via in-store, social network and telephone call conversation.

### **Salespersons**

Salespersons or beauty advisors/consultants is a representative of counter brand facial skincare products' company. They tended to be trained with a product knowledge, selling skills and a promotional campaign communication. Accordingly, above knowledge developed beauty advisors/consultants to be a counter brand facial skincare products' expert of a company. Their role encompassed an ability of products and services providing to consumers at a place of a counter in a store, social network and a telephone call conversation.

### **Promotion**

A promotion from counter brand facial skincare products were a sampling and a gift with purchase. Counter brand facial skincare products' sampling was in the form of free product or product trial. Counter brand facial skincare products trial was a free product to consumers where consumers could get for free at the brand counter. Product trial promotion would create consumers' product experience and it may lead through consumer purchases. A promotion was showing in a form of gift with purchase; special gift sets or a premium (i.e., hand bag) where consumers could get a gift set or a premium when they purchased cosmetic products of that brand. A condition getting a gift set or a premium was indicated with a total price purchase condition within a specific period of time. Above details was elaborated in a promotional campaign as a business tool's driver. Sellers conceived a promotion is a necessity for counter brand facial skincare business in order to influence consumers' purchase and also to gain a competitive advantage from their competitors.

Above in-depth interview stated main factors: product quality, brand, beauty advisor/consultants and promotion offered that influencing consumer's purchase decision and recommend to friend. In addition to results of in-depth interviews, the results from focus group interviews from consumers of counter brand facial skincare products are crucial for a study.

### **Focus Group Interviews**

A focus group was conducted among counter brand facial skincare products' consumers, who had different occupations and vary of age level. Participant or consumers of a study consumed different product type's usage and also different types of brands consumption. Participants stated factors influencing their purchase behaviors and recommendation of counter brand facial skincare products in an analogous array. A technology was shown as a fellow mediator of the customer loyalty factor.



## **Product Quality**

Participants encountered counter brand facial skincare product benefits as an important factor for their purchase. Main counter brand facial skincare product benefits in consumers' mind were clear skin result, anti-wrinkle and a firming facial skin condition. A multi-solution was also mentioned from participants as a counter brand facial skincare product benefit. Therefore, consumers purchased their products from product performance expectations. In addition, a new product formulation was shown as a factor to purchase from participants. A formulation that adding a collagen was stated as an example of a new product in consumers' mind. Again, multi-benefits or new ingredient products that showing additional benefits would cultivate a factor for consumers' consideration to purchase.

## **Brand**

Premium brand was countered as a brand perception of participants. They perceived counter brand facial skincare products as the brand that they could make a certain on their trust. Counter brand facial skincare is as an international brand or as a well-established brand of participants. A well-established brand represented a positive of a brand image that cultivating a brand purchase. A well established brand reflects a good brand image or as a premium brand that inducing consumers' purchase. In short, counter brand skincare products' brands are reflecting an asset of its brand.

## **Price**

Regarding to counter brand facial skincare products was perceived as a premium brand from participants. As such, a premium brand was reflecting to a premium price to consumers. All participants stated counter brand facial skincare products are at a premium price with associating to another facial skincare products that are available in a market. One selling channel of counter brand facial skincare products is in department stores. Department stores were showing as a quality product of places. In sum, counter brand facial skincare products was in a position of premium price product. At a premium price of brand, participants acknowledged counter brand facial skincare products as their products from its high quality products standing.

Product payment method was based on a convenience of consumers. Altogether of cash base, credit card, M-banking at in-store and online payment were mentioned from participants. Generally, an online payment method was accessible for consumers who did a purchase via online channel, for example, from online shop and phone purchase. Cash base, credit card, M-banking were a payment method at a counter point to consumers.

In a particular to a focus group results, consumers were likely to focus more on their purchase behaviors rather focusing on their recommend to friends. A technology has an influence on purchase payment method via M-Banking. In addition to technology, COVID-19 induced salesperson to contact consumers by phone and made a sales with online payment. Talking to counter brand facial skincare products' price, consumers considered financial loss and product's failure when their purchase.

## **Product Information**

Generally, participants sought product information by online media. An online media covered from mobile application and google source information. Throughout COVID-19, participants were likely to search product information via online tools. Friends and relatives were also their main search information. Crossing an omni channel, participants would search product information from stores' staffs but not from online-shop information. They argued that in an era of COVID-19, they were less likely to spend their time in-store shopping. A source of in-store product information was available by salesperson at the counter where they can get product information in a store, line application or call conversation. Salesperson at the counter was likely representing a focal source of information to consumers when they had insufficient information from social media. Thereby, salesperson at the counter was a vital source of in-store information of consumers' purchase.

## **Product Trial**

A free products was counted as an additional benefit from business party. 90% of participants revealed free product for trial as a value benefits before making their purchase. There were two ways to get a free product for trial, at a counter in a department store and a counter brand online shop. Participants believed product trial producing their consumption experience through their purchase. Ensuring product benefits of participants, a consumption experience leaded consumers to their purchase decision.

## **Discussion**

This study presented a discussion of the use of in-depth interview and focus groups as data source triangulation in qualitative inquiry. Reserch results shows a validity from a data cross examination between marketers and consumers. A similarity of in-depth interview and focus groups shows a study's data accuracy. The exploratory research results supported the association of consumers' behavioral and attitudinal through the customer loyalty concept. Consumers combined behavioral and attitudinal factors simultaneously on their loyalty: purchase, re-purchase and recommend to friends. In addition, technology and COVID-19 motivated parcipants standing and highlighting online tools to their purchase. A focus group results presented a gift with purchase was not a principal of their purchase. A data triangulation shows an analogous result from an in-depth interview and focus group. Its shows a formation of customer loyalty or antecedents of customer loyalty in a study model.

## **Antecedents of Customer Loyalty**

From the exploratory research results: product quality, brand trust, financial risk, product communication and product trial were predominantly influenced through the customer loyalty.

## **Product Quality**

Number of previous research has been concluded the product quality as key influencers of consumer's purchase (Faisala-E-Alam, 2020; Kotler & Armstrong, 2010; Saleem, Ghafar, Ibrahim, Yousuf & Ahmed, 2015). A positive relationship between the perceive quality and the customer loyalty is a conclusion. Particularly on the greater of the product quality,

the more likely of consumers to recommend product to friends (Hemanth Kumar et al., 2014). Therefore, the product quality has been found as a robust influence on the customer loyalty (Faisala-E-Alam, 2020; Zardi, Wardi & Evanita, 2018).

### **Brand Trust**

Previous research and exploratory research results conclude that brand name is a cue for consumers to be trusted (Jacoby, Szybillo & Schach, 1977; Shahid, Huusain & Azafar, 2017). Brand is representing as a product information of consumers. It is reflecting to product information in the aspect of product's tangible and intangible (Keller, 2001). Brand information generates a uniqueness of a brand that showing a brand identity (Shahid, Huusain & Azafar, 2017). Brand identity creates a distinctive in consumers' mind, it means consumers trust in a brand differ (Shahid, Huusain & Azafar, 2017). Brand trust diminishes a risk of purchase thus it makes a purchase from consumers (Delgado-Ballester et al., 2003).

### **Financial Risk**

Price is encountered in financial term on consumers' mind. Consumers are concerned about product price since they perceive a risk from their purchase or their financial risk (Faisala-E-Alam, 2020; Saleem et al., 2015; Snoj et al., 2004; Zardi, Wardi & Evanita, 2018). Consumers perceived that counter brand facial skincare products are a group of a prestige price, therefore, prestige price employed a risk of consumer purchase. Financial risk shows as an antecedent of the counter brand facial skincare's customer loyalty.

### **Communication**

Advertising consists of an information of product and service knowledge. Above information is encountered hedonic and social function. Advertising facilitates viewers to aware and get products and services information through their decision making. It represents a search information of products and services (Ababio & Yamoah, 2016; Ha et al., 2011; Kamins, Alpert & Elliott, 2000; Nelson, 1970). Hedonic communication represents an entertainment and the socialization aspects of consumer's learning process. Regarding to the exploratory research result, consumers employed communication via salespersons, online/social media, E-WOM communication through their loyalty.

### **Salesperson Communication**

A salesperson provides an interpersonal communication of products and services offering which would be influence consumers to purchase (Clark, Zboja & Voorhees, 2012). Salesperson is a worthy marketing communication tool of marketers to transmit a marketing message to consumers subsequently they can direct a marketing message through consumer's purchase decision (Dion, Paul & Notarantonio, 1992). There are two main channel communication from salesperson; in store and telephone conversation. In a particular to counter brand facial skincare products which has a salesperson locating at a counter, they are a dominant communicator who can convey marketing message to consumers influencing the customer loyalty.

## **Online Communication**

Mobile application is made available to a multitude of the people and business showing their statements via the internet. Positive and negative statements made by prospect, consumers and former consumers sharing about a product, services and/or company. Prior purchase any products, consumers are missing of the actual products' experience, thus accessing other consumers' review online on a product quality after purchase can show an encouraging or as an influence factor on brand and products purchase (Jalivan & Sameii, 2012; Almana & Mirza, 2013, Sallam & Wahid, 2015). This means the enjoyment of the use of the mobile application or social media communication reflecting consumers' purchase (Li 2011). A favorable communication of consumers' experience through online communities/social media communication can get a recommend to friends of counter brand facial skincare products' brands.

## **E-WOM**

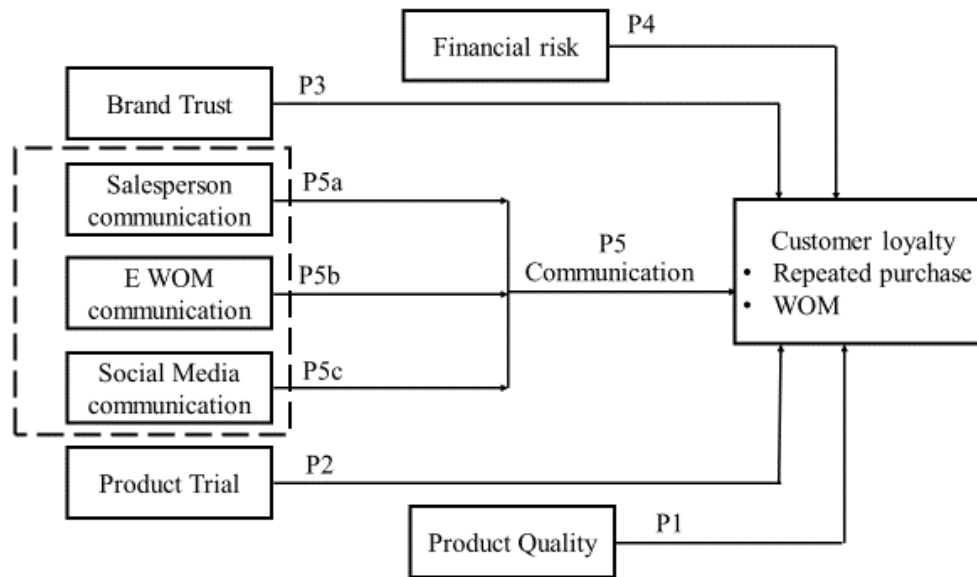
E-WOM is now remarked to be an ordinary way of consumers' communication and it represents as a natural source of an information by consumers (Kozinets, Valck, Wojnicki & Wilner, 2010; Zhu and Zhang, 2010). Consumers who has accepted a well company reputation, they are likely to share a positive recommendation (Walsh, Mitchell, Jackson & Beatty, 2009). This circumstance cultivates an influencer of sharing product and brand information via social network. E-WOM represents as a business crucial driver because of its influence on the customer loyalty (Omar, 2009). As such, E-WOM is be able to influence consumers' purchase, repurchase and the recommending of products to others.

## **Product Trial**

A product trial or free sample induces consumer behaviors whereby previous research argued a result of product trial accelerate a repeat purchase of sample brand earlier (Bawa & Shoemaker, 2004). Generally, a free product will be distributed as a new product introduction. It creates product familiarity among a prospect who interest to consume a product before they purchase. Product trial shapes consumers experience from reinforcing their behaviors into desired behaviors (Lamer, 1991). A desire behaviors of consumers yield consumer purchase likelihood. Consumers who accept product sample from company they do willing to try that product consequently they may purchase that product or product trial creates purchase opportunity. By conclusion, product trial shows a significant positive effect through consumer's purchase behaviors.

Based on the analysis of the previous researchs and the exploratory research investigation, a study forms the customer loyalty model with a COVID-19 mediataing from product quality, product trial, financial risk, brand trust, salesperson communication, social media communication and E-WOM. The customer loyalty is proposed in a multi-dimensional concept with compounding of repeated purchase and positive word of mouth (Dick & Basu, 1994; Srinivasan, Anderson & Ponnabolub, 2002; Watson, Beck, Henderson & Palmatier, 2015). Above pinpoints scholars implication in an array of extending previous research studies and a confirmation of customer loyalty factors association. Factors influencing customer loyalty model from this study is suggested as in figure 1, altogether with propositions propose. There are five propositions on the customer loyalty model of COVID-19 edition.

**FIGURE 1: A Counter Brand Facial Skincare Model of COVID-19 Edition**



A review of the literature and exploratory research results exhibits an important of customer loyalty model and it needs regular examinations due to its importance and predictive power subsequently following propositions are provided.

Proposition 1: Expectation of high product quality affects the counter brand facial skincare products customer loyalty.

Proposition 2: When consumers expect high customer loyalty, they are likely to experience high in product trial with the counter brand facial skincare products consumption.

Proposition 3: Greater brand trust results in higher on counter brand facial skincare customer loyalty.

Proposition 4: Expectation of low financial risk affects the counter brand facial skincare products customer loyalty.

Proposition 5: When consumers expect high customer loyalty, they are likely to experience high in a product communication with the counter brand facial skincare consumption.

Regarding to proposition 5, a product communication consists of an online communication and a salesperson communication, therefore, proposition 5a, 5b and 5c are suggested.

Proposition 5a: When consumers expect high customer loyalty, they are likely to experience high in a salesperson communication with the counter brand facial skincare consumption.

Proposition 5b: When consumers expect high customer loyalty, they are likely to experience high in a social media communication with the counter brand facial skincare consumption.

Proposition 5c: When consumers expect high customer loyalty, they are likely to experience high in E-WOM communication with the counter brand facial skincare consumption.

A communication of social media and E-WOM are showing a powerful of technology through consumer behaviors. Technological have also spawned various forms of communications that affecting population behaviors and method of communication. The internet provides a result of isolation and loneliness (Cotten, Anderson & McCullough, 2013). Technologies have been found to directly generate to better connection with others in a forms of communication threaten community (Althaus & Tewksbury, 2000). COVID-19 is not totally diminished a population's social relations since it is showing a prominent of business growth in a part of electronic communication which influencing consumers' well-being (Althaus & Tewksbury, 2000; Sims, Reed & Carr, 2016). COVID-19 cultivates a population to be hight eveloving on technology utilization. Technology generates business communication and online business channels. In sum, technology and COVID-19 mediate consumer behaviors, apparently, they mediate the customer loyalty of this study. A variation of above mediators might reason an alteration of the study model.

## CONCLUSION

This study extends the literature on the customer loyalty model where can be applied to an exploratory research to various type of products for generalization and/or empirical research. The conceptual model of this paper is an extension of the customer loyalty model proposed by Dick & Beau (1994). It would be an abundant of implication for a study which examined the process of purchase behavior from a perception stages through consumer behaviors or as an output (decision) of consumers' perception. This would be advantageous for marketers who are interested in creating consumer's purchase behaviors. The most important impact of a model is the simultaneous influence of product quality, product trial, financial risk, brand trust, salesperson communication, social media communication and E-WOM on the customer loyalty. A counter brand facial skincare model of COVID-19 edition confirms the relationships between perceived risk, perceived quality, and consumers' perceived value of Snoj, Korda and Mumel (2004). Also, a relating to coronavirus/COVID-19, a vulnerable disease, that showing as a new monster providing a mediator through the customer loyalty model model. In conclusion, this paper is showing a powerful of COVID-19 through the customer loyalty model from brand trust, E WOM, product trial, salesperson communication, online communication, financial risk and product quality, which contributes benefits to academic and business arena. A conceptual framework of this study might apply to prestige product of other product category during COVID-19 Edition.

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**CORPORATE SOCIAL RESPONSIBILITY DISCLOSURES IN THE TIME  
OF DIGITAL DISRUPTION: A CASE STUDY OF  
THAI LISTED STATE-OWNED MEDIA COMPANY**

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**ABSTRACT**

Digital disruption is an important challenge in social changes internationally. This study explored how the Thai listed state-owned media company discloses social responsibility information during digital disruption. In this type of organization, the government acts as a powerful stakeholder. Organized hypocrisy theory was used to explore characteristics employed in social responsibility disclosure. An in-depth exploratory case study involving disclosure from annual reports and sustainability reports, supported by semi-structure (face-to-face) interviews was employed. Data were analyzed in accordance with qualitative content analysis. The findings suggested that degree of government ownership and financial performance can influence the characters of corporate social responsibility disclosures in the Thai state-owned media company. Further, the finding indicates that the use of organized hypocrisy disclosure strategies allows the company to manage challenges from conflicting stakeholder expectations during digital disruption. The findings provide additional support for the opportunities to learn for social responsibility disclosure strategies in a specific context.

**KEY WORDS:** : Media Company, Social Responsibility Disclosures, Digital Disruption, Case Study

## INTRODUCTION AND RATIONALE

Digital technology has a large impact on media sector of increasing competition and contestability (Illia et al., 2017). However, considering on the demand side, it also affects media literacy of audiences. This digital disruption may offer the potential to take risks to media companies from increasing expectations by different stakeholders. Corporate Social Responsibility (CSR) has become much more important in managing organizations' risks such as reputation risk (Bebbington et al., 2008). Also, various researchers claim that CSR disclosures are signals to increase reputation and impression (e.g. Friedman & Miles, 2001; Hasseldine et al., 2005; Neu et al., 1998; Toms, 2002). Among the challenges of digital era, disclosures of CSR information may serve to manage socially accountable image. This tends to increase legitimacy and allow organizations to use CSR disclosure as a strategy to manage companies' reputations and images (Bebbington et al., 2008; Fombrun & Shanley, 1990; Tata & Prasad, 2015). However, digital disruption provides conflicting expectations which may lead to risks to organizations. Therefore, managing expectations through CSR disclosures may trigger organizations to adopt inconsistent disclosures between talk and actions.

To explore this challenge in more detail, this research applied organized hypocrisy theory as a theoretical framework to explore characteristics of CSR disclosures. Brunsson (2007) mentioned that organizations often manage conflicting stakeholder expectations through organized hypocrisy.

Hypocrisy is defined as "a response to a world in which values, ideas, or people are in conflict a way in which individuals and organizations handle such conflicts" (Brunsson, 2007). In addition, organized hypocrisy is "a way of handling conflicts by reflecting them in inconsistencies among talk, decisions, and actions" (Brunsson, 2007, p. 115). As hypocrisy allows chronological distance between talk, decisions, and actions (Brunsson, 1989), talk and decisions can shape stakeholders' expectations about CSR actions (Cho et al., 2015). By understanding how CSR disclosures change over time, organized hypocrisy may be better to be a strategy of managing conflicting expectation which lead to positive organizational change.

Recently, several risks from digital disruption are coming together to cause challenges to the existing media, particular listed state-owned media companies due to these organizations serve both economic and societal functions. Government ownership has been seen to motivate the public interest rather than private organization (Garde Sánchez et al., 2017). A higher degree of government ownership is expected to be more committed to CSR, as the government role is to contribute to society in order to legitimise its operations (Garde Sánchez et al., 2017). While the societal obligations of media organizations have been studied extensively in the time of digital disruption, the less knowledge about how listed state-owned companies in media sector disclose their social responsibility. In order to manage risk from digital disruption, organization might carefully use CSR disclosures in the first place to communicate appropriately in connection to digital disruption. When organizations face multiple risks and expectations in the time of digital disruption, they tend to give priority to stakeholders that are more powerful (Michelon et al., 2015).

In Thailand, listed state-owned media company is a media organization where the government has significant control through majority ownership more than 50% (SEPO, 2021). On the one hand, it was listed on the capital markets in order to improve financial perfor-

mance. On the other hand, Thai listed state-owned media company is used as important mechanism for the government to stimulate social changes (NSC, 2019). However, it needs to balance between social and financial goals. Thus, the nature of Thai listed state-owned media company generates challenges in pursuing conflicting stakeholder expectations.

Reporting information in the time of digital disruption pose questions about principle of CSR disclosures by state-owned companies especially in developing countries (Bruton et al., 2013). Thus, the aim of this study is thus to explore how disclosures by the listed state-owned media company in terms of talk, decisions and actions about responsibility to society are processed in the time of digital disruption.

According to the motivations and aim mentioned above, this research aimed to answer two main research questions:

RQ1: What are the key factors influence the characters of CSR disclosures in the Thai listed state-owned media company?

RQ2: How do the Thai listed state-owned media company discloses social responsibility information in the time of digital disruption?

To address these research questions, the researcher employed a qualitative case study through the analysis of CSR disclosures. The study is based on annual reports and sustainability reports in the period between 2016 and 2019, and interviews with both executive and non-executive employees of the Thai listed state-owned media company during the digital disruption. This research makes an important theoretical and empirical contributions to the previous research.

## **LITERATURE REVIEW**

### **Organized hypocrisy**

According to Brunsson (2007, p. 113), ‘organising hypocrisy’ as “a response to a world in which values, ideals, or people are in conflicts with the way in which individuals and organizations handle such conflicts”. Organized hypocrisy does not means that organizations are disregarding social and environmental issues (Brunsson, 2019). ‘Hypocrisy makes it possible for people to talk and make decisions about high values, even if they do not act in accordance with such values themselves’ (Brunsson, 2019, p. XVII). An organization’s commitment in reports may be recognized the importance of social responsibility. However, it may be separated from the operation for generating a financial profit. Similarly, organizations may disclose an importance of business plan to improve long-term sustainability but limit details and actual actions. Empirically, Cho et al. (2015) provide how counter-coupling talk and decision with action is an important strategy to maintain an organization’s creditability whereas She and Michelon (2018) demonstrate that large organizations use organized hypocrisy as a CSR disclosure strategy to manage conflicting stakeholder expectations and maintain legitimacy. Also, a decoupling of CSR talk, decision and actions allow public organization which is the European Commission in EU environmental policy used hypocritical policy in a time of post-crisis (Knill et al., 2020). Organizations need to secure legitimacy by disclosing that organizations respond to concerns of broader

group of stakeholders (She & Michelon, 2018; Suchman, 1995). However, these concerns seem to conflict. Thus, CSR talk that is designed for increasing impression and confidence from one stakeholder may be unacceptable by other stakeholders.

In this study, organized hypocrisy is used for addressing CSR disclosure in the time of digital disruption. If the case has not taken CSR disclosure seriously, for example, disclosures is not linked to actions, the disclosure can be categorised as organized hypocrisy.

### **CSR disclosures and state-owned media companies**

CSR disclosures contain both symbolic visions about the future and actual actions (Christensen et al., 2013; Schultz & Wehmeier, 2010; Wehmeier & Schultz, 2011). Disclosure about symbolic visions refers to ‘talk’. Such ‘talk’ may draw on shaping organizational actions in a positive way that benefit the society. Organizations may start with CSR talk such as vision, mission, and commitment. These disclosures intend to stimulate social change and CSR improvement within organizations (Christensen et al., 2013). Although the difference between talk and actions is a form of hypocrisy, this hypocrisy aims to drive decisions and actions that conform to CSR talk (Cho et al., 2015; Christensen et al., 2013). These studies view CSR talk as a tool to persuade organizational actors to engage with CSR. However, there are small number of empirical studies examining CSR disclosures by state-owned media companies.

A systemic view of CSR in state-owned companies by Córdoba-Pachón et al. (2014) shows that although managers show awareness of and commitment to CSR through a number of CSR talk, there remains an crucial need to implement their CSR commitments in organizational plans, strategies and daily actions. Li et al. (2013) find that the level of government ownership has little effect on CSR disclosure and the CSR disclosure’s quality by state-owned companies is weaker than by private companies.

The media’s obligations to society are come under pressure since expectations have changed due to digital disruption. Various digital platforms and channels have disrupted how traditional media organization operate. In addition, public media companies are expected to provide CSR information than private media companies (Syvertsen et al., 2019). Previous study relating to media companies shows that characteristics of a high degree of government intervention supports strong professional journalism (Hallin & Mancini, 2004). State-owned media companies are expected to play a responsible role to society due to the high degree of government ownership. In attempting to understand how CSR disclosures are used in these organizations, government ownership may be considered as one of factors influences characters of CSR disclosures by listed state-owned media companies.

A simple distinction between listed state-owned media companies and private media companies is that the former is owned by the government and the latter is owned by non-government entities. Listed state-owned companies are organizations that exist as profit-making entities but are partly owned by central governments. Thus, they are indirectly owned by citizens who pay taxes. In the literature, it is common to differentiate clearly between public and private media, seeing the first as being for the citizens and the second for profit. Although listed state-owned media companies have the role to operate competitively in a free market, they need to provide CSR missions and commitments and apply these disclosures in their relations with citizens (Roper & Barker, 2011).

## METHODOLOGY

This study was conducted to explore CSR disclosures in Thai listed state-owned media company using a case study approach (Yin, 2009), employing qualitative content analysis. MEDIA<sup>4</sup> was selected to investigate CSR disclosures based on multiple risks and expectations in the time of digital disruptions. The case is interesting by the range of stakeholders involves and because it is a government-owned company.

The case drew on semi-structure in-depth interview data and textual data. The interview data were collected in 2017 through face-to-face interviews. The participants were chosen from expert individuals who hold powerful positions or have special knowledge related to a CSR disclosures profession (Bogner et al., 2009). Before the fieldwork, the researcher explored the backgrounds and experiences of participants through institutions and networks engaged with the CSR disclosures and CSR actions of MEDIA.

The interviews took place at a time when the organization was disrupted by digital world through huge negative financial performance according to evidence in the annual report in 2016. The participants were classified as 2 groups: internal stakeholders and external stakeholders. The researcher aims to examine perceptions that brought different kinds of knowledge claims about CSR disclosures of MEDIA. Further, the interviews were performed with 8 participants including 6 internal stakeholders (3 management employees and 3 non-management employees) and external stakeholders (1 consumer and 1 regulator). This was concurred by Collis and Hussey (2014) that in order to use the data for qualitative analysis at least 5 participants should be in-depth interview to obtain appropriate information. The interviews were tape-recorded and transcribed verbatim in a word document. Interviews are used to examine the perceptions of stakeholders from their experiences with the case. Interviews include both internal stakeholders and external stakeholders. External stakeholders are used to understand context and perceptions related to the case while internal stakeholders are emphasized to understand in-depth information and how organizational actors decide specific CSR disclosures among multiple risks and expectations. The semi-structured interview guide consisted of a set of open-ended questions. Prior to the primary data collection, a pilot study was conducted to test the interview guide.

Textual data including annual reports and sustainability reports are emphasized to examine CSR disclosures. Texture data consists of 4 annual reports and 4 sustainability reports for the years ending 2016 to 2019, published by MEDIA. Textual data also including Internal archival materials and publicly available archival materials. Textual data sources were used to identify CSR characteristics and to gather CSR disclosures chronologically over a period of time between 2016 and 2019. These multiple sources allowed researcher triangulated of themes and conclusions (Miles & Huberman, 1984). The qualitative text analysis software NVivo 12 was used to process, store, organize, and code raw data originating from interview transcripts, annual reports, and sustainability reports. The transcripts and reports were examined through a qualitative content analysis (Bryman, 2016). Codes were generated by the researcher. After went through initial codes several times, revising and adjusting and the coding was then applied. The codes and associated quotations and ex-

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<sup>4</sup> The pseudonym for confidentiality purpose

cerptions were grouped into main categories according to common theme (O'Dwyer, 2004).

Texture data consisted of only voluntary disclosure. CSR disclosures that were reported only because accounting standards required disclosure (such as the financial statements) in the annual report were not included in the analysis. CSR disclosures mainly focused on disclosure in annual reports and sustainability reports. Annual reports were considered because they are the most important source of an organization's information by external stakeholders (Lang & Lundholm, 1993) and they provide the key information source in studies on corporate disclosures (Guthrie & Parker, 1989; Newson & Deegan, 2002).

The 2016 to 2019 annual reports and sustainability reports and interview transcript were re-examined at least four times to ensure that the data were being interpreted correctly. Once the initial readings were completed, the researcher re-examined the data and identified extracts that related to CSR information during digital disruption. The themes from data were categorized as two main areas: the factors influence the characters of CSR disclosures and CSR disclosures in the time of digital disruption. Data were analyzed both within and across categories to identify changes of CSR disclosures.

### **Background information of the case**

MEDIA is a state-owned company which provides mass communication business operation. Its core businesses include the radio business, television business, and Thai News Agency. Its major shareholder remains the Ministry of Finance and it operates as a listed state-owned company under the supervision of the Office of the Prime Minister. Because the Ministry of Finance is the largest shareholder, government expectations influence the key operations as well as generating income for the country. As the Thai News Agency, it has to cooperate with international news agencies to exchange reliable interesting news and other information. While MEDIA have been expected to gain income for supporting the Thai government, the company has faced with financial losses associated with digital disruption. The partial overlapping of functions and responsibilities has resulted in conflicting MEDIA's goals.

## **FINDINGS**

The researcher begins this section by identifying the key factors influence the characters of corporate social responsibility disclosures, then go on to describe how the Thai listed state-owned media company discloses social responsibility information in the time of digital disruption over time period of study.

### **The key factors influence the characters of CSR disclosures**

Examining the data, the government power is construed as a key factor influences disclosures regarding social responsibility by MEDIA. According to digital disruption, people want MEDIA, which has a high degree of government ownership, to play a more active role by being a major contributor to educate people about critical thinking for perceiving news. For example, an executive employee involved in CSR disclosures explained,

*As a government-owned media company, the government asks our organization to cooperate with government policy. We attempt to support Thai society to be a 'knowledge-based society'. We contribute people's knowledge in order to use critical thinking for perceiving information particular news from digital sources. We call 'media literacy'.*

Also, the interview from a non-executive employee involved in CSR disclosures shows that the government expectations are improvement of both financial and social performance. As a major shareholder, the government expectations seem to influence how MEDIA disclosed its social responsibility information.

*The government requires the dividend from our organization because the Ministry of Finance is the major shareholder. Meanwhile, it requires us to be a social responsibility organization. We need to balance.*

From empirical evidence, financial performance is also the key factor influences the characters of MEDIA's CSR disclosures. For example, one of non-executive employee demonstrated,

*This year the company was disrupted by a large amount of financial losses. It is not normal situation. Thus, we need to cut unnecessary cost. However, as a media organization, we do not need to pay for the cost of social responsibility actions because we could use our broadcasting media to support this issue.*

An executive employee involved in CSR disclosures also added,

*Most of our CSR actions are our products. Thus, we rarely pay for cost of CSR actions.*

### **CSR disclosures in the time of digital disruption**

Among the disclosures, the three key risks related to the digital disruption were presented in both annual reports and sustainability reports: risk from program content competitiveness (strategic risk), risk from inability in realizing the business opportunities in technological changes (strategic risk), and risk from the plunge of operating revenues (financial risk). These critical risks were linked to the huge transition to digital technology age. In order to manage the risks, MEDIA introduced risk management plans, both short and long-terms. These plans included working together with government sector, formulating the new marketing and sale strategy, and seeking for new income sources. The analysis indicated the relationship between the choice of CSR talk and CSR actions of MEDIA relies on organized hypocrisy strategy.

MEDIA disclosed its vision, mission, and commitment by emphasising on the important of media literacy of Thai citizens. For example, it aimed to maintain social responsibility mission by focusing on promoting a 'knowledge-based society' through 2016 sustainability reports.

**FIGURE 1:** Excerpt from MEDIA's 2016 sustainability report, p.6

### Main Mission

To provide fully and integrated multimedia services and to stand as ASEAN's leading fully integrated multimedia organization with commitment to promoting a knowledge-based society.

Changes in CSR disclosures during the digital disruption resulted in communicating more extensively about its decisions and actions. 'knowledge-based society' is a key theme in producing contents under sustainability perspective of MEDIA. This theme focuses on informative, news, knowledge and creative entertainment contents.

Also, in the year 2016-2019, MEDIA disclosed 'Media social responsibility framework' in order to present the key plan under 'knowledge-based society' theme. The disclosure related to 'knowledge-based society' in 2016 and 2017 reports are primarily at the level of talk and decision. For example, in 2017 reports, the organization has implemented new CSR program such as a 'U. Have Ideas', which is a workshop on creativity design and development among University students who are interested in media production. Even the company presented some CSR actions, these actions were not provided the detail plan for future actions.

With the impact of digital disruption, MEDIA provided details on the actions relating to the 'knowledge-based society' commitment through the 2018 and 2019 reports as the following example,

*Social media better meet the consumers' needs in enabling fast information sharing which result in lower fact-checking and the rise of fake news having a negative impact on the society. Recognizing the importance of raising the awareness of the general public regarding media literacy, MEDIA has introduced a TV program "The "Sure and Share" with an aim to provide useful guidelines for fact-checking and searching for accurate and reliable source of information. (MEDIA, Annual Report, 2018, p.103)*

This is an example of meaningful CSR disclosure due to 'fake news' is harm to society. It has a predominantly negative impact on Thai society. MEDIA disclosed CSR action by demonstrating a TV program namely "sure and share" to strengthen 'knowledge-based society' commitment. The detail disclosure in both 2018 and 2019 reports generates a carefully response to the effects of the digital disruption in an issue of 'Fake news'. For example, MEDIA elaborated on the explaining the social responsibility performance in 2019 sustainability report.

*In 2019, MEDIA and Thai Media Fund also initiated the "Fact Checker", Fact Checking Center" to allow Thai youth to embrace the new habit of checking before sharing...which focused on enhancing media literacy among Thai youth and enabled them to have immune against fake*



*news and awareness on the impact of fake news sharing. (MEDIA, Sustainability Report, 2019, p.68)*

The evidence from the interview also supports the above reports. For example, one of non-executive employee views,

*I feel that MEDIA is the organization that is harmless to society. Recently, in the condition that media organizations need to think about rating, cost, and profit in order to survive in their business, MEDIA provides a small area to keep thinking about social responsibility. I believe that if I move to other media companies, I cannot have this opportunity.*

Another non-management employee added,

*The program can maintain a positive image, benefit to society and generate income for the organization.*

Organized hypocrisy was applied by MEDIA, highlight its inconsistency in talk, decisions, and actions in order to manage stakeholder expectations. Base on CSR talk, executive employee involved in CSR disclosures believed that MEDIA need to maintain its image through organizational identity.

*The character of organization is not for profit maximization. It needs to maintain image of 'knowledge-based society' which is the long-term identity of the organization.*

Interestingly, apart from suggesting that maintaining image as a social responsibility media was important for long term identity, the interview data also show that an image of 'knowledge-based society' was linked to the subsequent decision through concrete framework.

*We have a concrete framework which is different from private sector. Content must be useful and meaningful. This is the foundation of the 'knowledge-based society' concept. As a public media organization, we need to provide information that can educate people in society and support their quality of life.*

Although, digital technology disrupted financial performance of MEDIA, its CSR talk and decisions related to 'knowledge-based society' commitment were maintained which made the organization construct the social changes above a financial problem as an executive employee explained,

*Media sector has been affected by digital technology. Despite the organization faces the financial losses, CSR actions are still ongoing under organizational structure. Moreover, the guidelines of the Stock Exchange of Thailand and state-owned enterprise office also guide us to follow. We view that our standpoint of 'knowledge-based society' will contribute sustainability of our organization. Audiences will understand and trust us.*

## Changes in CSR disclosures

From 2016 to 2019, the topic of CSR disclosures identified as ‘talk’ increased. Action-focused disclosures increase in the CSR mission of ‘media literacy’. As found in 2016, the disclosure explains exactly how the media social responsibility plan was implemented. The company has moved from providing almost no disclosure on action in 2016 to recognising the fact that it is responsible for providing stakeholders with some detail on how this is being processed in 2019.

The company has increased the extent of disclosures focusing specifically on actions related to media literacy underpinning ‘knowledge-based society’ theme in 2019. While the company is classified as using an organized hypocrisy strategy in its disclosure, the increase in the extent of actions can be interpreted positively. In attempting to balance competing social responsibility and profitability pressures, the company uses organized hypocrisy not only to manage conflicting expectations but also to provide the potential of meaningful change in Thai society.

## DISCUSSION

According to the empirical evidence, there are two main factors influence the characters of CSR disclosure. This finding concurs with Garde Sánchez et al. (2017). There is a strong consensus that the degree of government ownership and financial performance are likely to influence the choice of CSR talk, decisions, and actions.

By focusing on CSR disclosures, this study sheds more light on the organized hypocrisy strategies that may be involved and contributes to the argument on the limitations of CSR in general. Previous literature has found evidence of organized hypocrisy disclosure strategies without focusing on the specific context of listed state-owned media company. This research extends literature critically by examining a specific context. The finding on the decoupling of CSR talk and actions (focus on CSR disclosures in annual reports and sustainability reports) extend the literature on organized hypocrisy (Cho et al., 2015; She & Michelon, 2018). This decoupling can be explained by organized hypocrisy strategies aimed at stimulate social change and CSR improvement within organizations (Cho et al., 2015; Christensen et al., 2013; Maroun, 2018). As can be seen from the results of case analysis, the evidence shows that organized hypocrisy strategy had been found when CSR talk, decisions, and actions were not consistent.

In line with Brunsson (2019)’s organized hypocrisy, the CSR disclosures employed in MEDIA’s annual reports and sustainability reports suggest that inconsistency among talk, decisions, and actions need to be used in order to maintain legitimacy. Some commitments were not changed to decisions or actions because it is impossible for the organization to achieve progress in all talk at a time. However, as a listed state-owned media company, MEDIA’s action is recognized as contributing to media literacy problem of Thai people. As a result, MEDIA’s CSR programs are about bringing value to Thai society. MEDIA’s organizational actors presented the connections between CSR talk, decision and future actions. They also recognized the limitations of being a major own by the government would place on its CSR efforts. Overall, the MEDIA’s reports indicated the development of CSR

programs reflected insights the researcher would find in the later research about CSR and CSR reporting.

The findings make an important contribution by confirming the application of organized hypocrisy for explaining changes in CSR disclosures of the Thai state-owned media company. The organization prefers to disclose action-focused disclosures in the CSR mission of ‘media literacy’ underpinning ‘knowledge-based society’ in the time of digital disruption. These social responsibility disclosure strategies rely on degree of government ownership and financial performance.

## **CONCLUSION**

This study highlights how the Thai listed state-owned media company discloses social responsibility information during digital disruption. It employed a case study methodology to provide an account of the way in which CSR disclosures were used. In this study, organized hypocrisy is used as a theoretical framework. This study found that degree of government ownership and financial performance can influence the characters of CSR disclosures in the Thai state-owned media company. Also, the use of organized hypocrisy disclosure strategies allows the company to manage challenges from conflicting stakeholder expectations during digital disruption. The key limitation is that, since the data are qualitative, the findings cannot be generalised to all media listed state-owned company; however, the researcher provides for a micro analysis of CSR disclosures in a specific context. Future research could focus at a more macro level (using quantitative data) on the CSR strategies employ in CSR disclosures. Further, the data for understanding CSR disclosures were limited to disclosures through reports. Thus, future research related to ad-hoc CSR disclosures on social media platforms may provide further contributions.

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## APPENDIX

### Guidelines on coding organized hypocrisy strategies

| Organized hypocrisy | Coding Guidelines                                                                                                                               |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Talk                | The sentence presents a disclosure on organization's commitments, visions, missions, and values regarding to social responsibility.             |
|                     | The perspectives of organizational actors present organization's commitments, visions, missions, and values regarding to social responsibility. |
| Decisions           | The sentence presents a disclosure on decisions regarding to social responsibility.                                                             |
|                     | The perspectives of organizational actors present decisions regarding to social responsibility.                                                 |
| Actions             | The sentence presents a disclosure on organization's actions regarding to social responsibility                                                 |
|                     | The perspectives of organizational actors present organization's actions regarding to social responsibility.                                    |

# **COVID-19: ONE YEAR ANNIVERSARY OF MARKET BOTTOM TO BULL MARKETS**

by

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## **ABSTRACT**

After one year Covid-19 anniversary, global market and economy have gone through an unusually swift recovery over the past year following the pandemic. Massive government and central bank stimulus injections have helped much of the rebound, considering one of a shortest bear market in history. As the economy re-open in developed countries, Covid-19 restrictions were being loosened as vaccines were more widely distributed; help increased positive sentiments in these countries. As investors' optimism grew, stocks began to recover from the panic selloff during March, 2020 bear markets (dropped more than 30 percent) in most many markets including Thai. Covid-19 crisis marked the end of the longest bull market since the last Financial Crisis in 2008 and the shortest bear market as it entered bull market after a month, with the market rebounded more than 20 percent and continue to grow to new all-time high particularly in the United States. In the mist of today vaccination era, volatility remains and inequality grows. The paper will reflect on Covid-19 impacts and lessons learned over the past year on our lives and investments for more sustainable return.

**KEY WORDS:** Covid-19 Crisis, Stock Market, Market Volatility, Government Stimulus, Financial Recovery



## **INTRODUCTION**

It has been one full year since the Thai stock market crashed on March 13, 2020 down 969.08 points to the lowest in 9 years, as the novel coronavirus, Covid-19 initial wave of infections surged from the boxing match. As cases rose around the world, governments ordered shut down and market crashed amid uncertainties. The CBOE S&P 500 Volatility Index (VIX) reached an all-time high, even beyond those seen during the 2008 financial crisis. The paper will reflect on the past year through literatures and data that illustrate the extend of Covid-19 impacts on the stock market particularly Thai and the US and how our lives, daily habits and our portfolios changed.

The World Health Organization (WHO) issued its first global alert of the Covid-19 on 30th January, 2020 and announced the Covid-19 as a pandemic on 11th March, 2020 (WHO, 2020). In order to control the spread of the virus, several governments around the world continued to introduce and adopt several preventive measures on health, travel restrictions, school closures, lock down of businesses, physical and social distancing, and hygiene practices such as hands washing and wearing face masks.

As the number of Covid-19 cases continue to rise, global economic activities continue to suffer from lock downs, travel restrictions, borders closure, social distancing and containment measures (Almond & Mazumder 2005; Garrett 2008). Resulting from global lockdowns, the slowdown in the economic activity led a lot of businesses to reduce their productions, which in turn led to layoffs, income reductions and reduced consumptions. These severely affected manufacturing, employment, private consumption, private investment, as well as merchandise exports which contracted across major countries including Thailand trading partners especially in the second quarter of 2020. According to Bank of Thailand, Thai economy was projected to contract sharply in 2020 and would take more than three years to recover to pre-pandemic level. In this environment, companies have lower profits, declining growth expectations, and stock prices were negatively impacted as investors were uncertain about the expected future cash flow of the companies, thus requiring higher return in order to participate in the stock market during the first phase of the pandemic. In line with Decker and Schmitz (2016), investors are said to be more risk averse during health shocks.

## **OBJECTIVES**

1. To explore the impact of Covid-19 crisis on stock market over the past one year.
2. To reflect on the extend of Covid-19 impacts and investment lessons learned during the outbreak.
3. To explore major policy response by US governments that affects financial recovery during Covid-19 crisis.

Without vaccine to stop the virus, the initial priority of the world is to restrict the spread as much as possible. In doing so, many countries implemented strict lockdown procedures never seen before. Year 2020 was certainly a year of historical changes and adaptations in many areas including: 1) lowest Thai GDP of negative 6.1 percent in 10 years comparing

to negative 0.7 percent during subprime crisis in 2008 as number of tourists decline enormously; 2) historically low interest rate of 0.5 percent in Thai market ; 3) sharpest oil price decline (more than 60%) to less than USD 10 per barrel; 4) most circuit breakers to halt trading in stock market history; 5) stock market opened for trading during Thai New Year as there were no holiday. Countries had come to an almost complete standstill never seen in history; no flights, closure of department stores, theaters, spa, barbers, restaurants, gyms, or even Thai government lottery were allowed to operate and people spent the most time at home.

Many studies had been conducted to find out the overall impacts of Covid-19 on the global economy. However, as the world has still been going through the pandemic and vaccines are continued closely monitored and rolled out, it is still too early to conclude the economic losses. The size of the economic losses will depend largely on the severity, durations of the spread, extended resurgence of the pandemic, vaccines efficacy, and the corresponding policies of different countries. The direct economic consequence of Covid-19 pandemic is the strict temporary lockdown of almost all major economies worldwide.

### **IMPACTS OF COVID-19 CRISIS ON STOCK MARKET**

As seen in the past crises, economic uncertainty often led to financial market volatility. The CBOE (Chicago Board Options Exchange) Volatility Index (VIX) is a real time index that offers insight into how investors are feeling about near term (30 days) price swings and market conditions. Investors generally gauge higher VIX as greater risk, more fear, higher uncertainty and larger market declines (Investopedia).

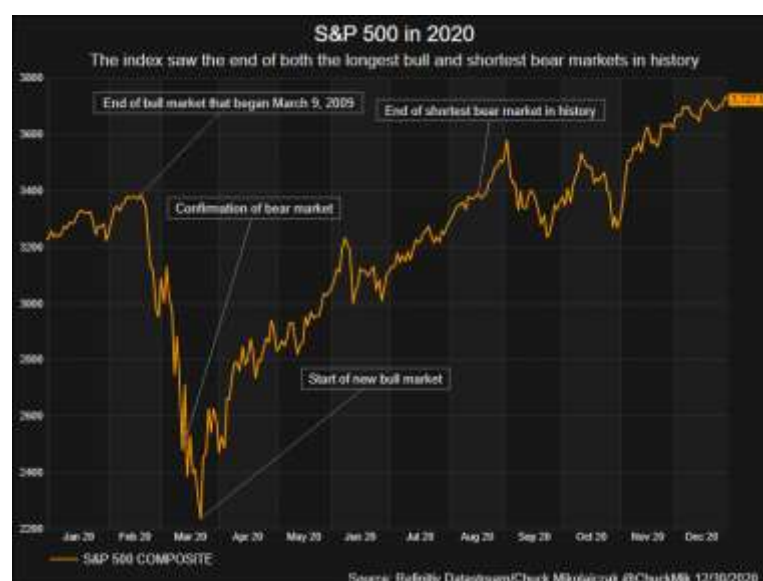
Stock market in 2020 is one of the most volatile years in history as Covid-19 crisis shocked global economy. Stock market around the world experienced unprecedented decline amid high uncertainty. While Covid-19 volatility began around mid-February, it peaked on the new “Black Monday” starting March 9, 2020 that week on Thursday and the Dow plunged 10 percent (2,352 points) for its worst day since Black Monday in 1987 (Stevens, Fitzgerald & Imbert, 2020). On that day, oil prices plummeted and global stock market collapsed in a single day, the biggest one day drop since the global financial crisis of 2008. Oil stocks also suffered, impacted by the decline in travels combining with oil price war between Russia and Saudi Arabia. Travel related shares, airlines, hotels, cruises, restaurants, sports and entertainments businesses were first to be sold as lock down, quarantines, and containment measures were implemented globally.

During the crash in March 2020, there were multiple severe daily drops in the global stock market as the bad news of covid-19 spreaded, the largest drop for S&P was on March 23, 2020 and it lost as much as 35 percent of its value relative to its recent historical height achieved on February 19, 2020. These large declines in assets prices were the result of panic selling, forced selling, and automatic triggers in algorithmic trading. As lost accelerated in the stock market, investors were turning to holding cash. Investors were forced to sell even safe assets such as long dated Treasuries (10 to 30 years) resulting in hike in interest rate and liquidity crunch during the peak of Covid-19 pandemic. Though rising Treasury yields typically mean that investors are seeing improving economic outlook and/or expecting a rise in inflation; therefore, selling bonds holding causes bond prices to decline and yield to rise, but this was not the case when market was liquidating assets as fear and uncertainty rose.

Similar patterns continued across most financial and market crashes in history. A stock market crash occurs when stock prices fall suddenly and unexpectedly. As in Covid-19 pandemic that triggered a stock market crashes. Typically, market prices have been going up for a long time, people feel good, overly optimistic and borrow to buy assets at higher prices. When bad news spread, markets drop severely, accelerated by panic sell, force sell, and interest yield spike up led to liquidity crunch. History has shown that the magnitude of Covid-19 market decline was comparable to the financial crisis in October, 2008, Black Monday in 1987, and the start of the Great Depression in October and November 1929. The outbreak of Covid-19 was also comparable to terrorist attacks in many ways that it is an exogenous shock that has exerted severe consequences on daily life, caused public fear, and raised great economic uncertainty (Goodell, 2020). Wang and Young (2020) studied the impact of terrorist attacks on investor behavior and found that investor risk aversion is inversely related to terrorist activity driven mainly by emotional shock rather than changes in wealth; thus reducing flows to risky assets and stockpiling cash.

Relating to the Efficient Market Hypothesis (EMH), Fama (1970) suggested that prices incorporate all the available information at any point in time; however, from the past crises and financial anomalies, it is evident that the market is not efficient and systematic as believed by traditional financial theories during crisis. Vasileiou (2020) confirmed the assumption that the market was not efficient during Covid-19 crisis period and that the impacts of fear of Covid 19 was not always rationally incorporated in stock prices and that fear negatively influences the performance of the US stock market. There are many studies in the financial literatures on the impacts on financial market as a result of stock split (Fama et al.1969), inflation (Schwert 1981), accounting information (Brennan 1991), market overreaction (De Bondt & Thaler 1985; Baytas & Cakici 1999). However, there are not many empirical research studies that examine the reactions of the stock market when health crisis turns into global financial crisis.

**FIGURE 1:** Covid-19 ended the longest bull market since the 2008 financial crisis and rebounded quickest on hopes of vaccine and economy reopening



Source: Mikolajczak, 2020

Baker, Bloom, Davis, Kost, Sammon, and Viratyosin (2020), showed that from February 24 to March 24, 2020 in 22 trading days, there were 18 extremely high frequency of daily stock market moves, as incomparable to any incidents caused by previous pandemic outbreaks in the past 120 years, including the Spanish Flu that led to daily stock market swing that even remotely comparable in market responses to Covid-19 crisis. The study also stressed that large daily stock market moves during this period were in both directions. The S&P 500 index declined 33 percent from 21 February to its trough on 23 March, and the index then rose 30 percent from its bottom by the last trading day in April (figure 2). The studies found little support for explanation that stress more rapid information diffusion and the risk of death from Covid-19. The study concluded that the reason behind this abnormal movement was the result of policy response to the Covid-19 pandemics including lockdowns and production cuts that prompted tension among investors and real economies, as well as news about actual or prospective fiscal and monetary policy actions.

In line with Baker et al. (2020), Ozili and Arun (2020) also concluded that the increasing number of lockdowns, travel restrictions, and monetary policies during Covid-19 crisis directly influenced the opening, lowest, and highest prices of stock market indices in the United States. The study showed that due to uncertainty caused by the Covid-19 outbreak and the fear of losing profit in business, 6 trillion USD in wealth was washed out from the global stock market in the week of 24th February. In the same week, the S&P 500 index of the United States lost 5 trillion USD in wealth and that the largest 10 companies' losses accounted for trillions of USD in wealth.

Other stocks in major economies such as United Kingdom and Germany were even of harder hits compared to the United States. The studies also showed that the worst performers were in oil, gas, and coal sector with 50 percent negative return followed by travel and leisure with 40 percent negative return as well as other negatively impacted industry such as aerospace, mining, bank, and media sector (Fernandes, 2020). Zhang, Hu, and Ji (2020) called the response of the global stock market to the Covid-19 pandemic as “dramatic.” As proof to this claim, they brought the incident that the US stock market hit the circuit breaker four times within 10 days. Before this incident, the circuit breaker had triggered only once since its introduction in 1987. Similarly “dramatic,” Stock Exchange of Thailand (SET) also required the circuit breaker three times (on March 12th, 13th and 23rd, 2020) within 11 days, as there was no circuit breaker triggered in the last 11 years. To manage and restrain stock market from severe declines, SET has revised stock trading regulations including triggering of a circuit breaker (from -10% to -8%) and the ceiling and floor limits (to +/-15% of previous day closing price instead of +/-30%) and for short sellers to set price higher than the last trading price only to curb a heavy stock plummet.

Agreeing with Baker et al. (2020) and Cochrane (2020), it is important to address the health crisis created by Covid-19 in the way that is less damaging to the overall market and economies. There is room to further investigate the role of strict government lockdown and the importance of voluntary social distancing efforts and room to research into stock market reactions to fiscal and monetary policy actions during the 2020 pandemic. In view of the lockdowns around the globe, nature gets to heal while humans have more time working and staying at home. Ortmann, Pelster, and Wengerek (2020) studied how retail investors responded to the outbreak of Covid-19 and found trading activities increased by approximately 13.9 percent for every doubling of Covid-19 cases. The increase in activity was more obvious among males and older investor particularly from the period of February 23rd to March 22nd, and that they are more likely to engage in short selling. Their

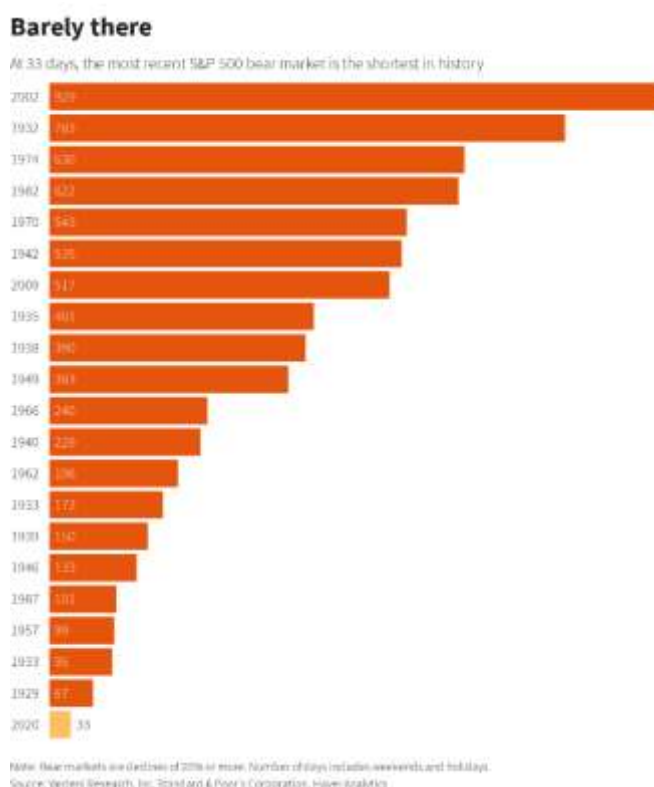
studies also showed that the number of new investors who first opened an account with the broker increases and at the same time increased their average trading activities but not on gold or cryptocurrencies investment.

This area of findings can be further investigated to incorporate variables such as market liquidity, monetary and fiscal policy, and the risk of USD devaluation on alternatives investment such as gold and cryptocurrencies investments. That more new and younger investors are interested in the stock market is an increasing trend worldwide, seen also in Thai stock market. According to SET, brokerage accounts have increased by more than 554,000 new accounts (as of September, 2020) which is a record increase compared to the average yearly increase of 230,000 to 330,000 new accounts. Today SET has a total of 1.45 million investors, an increase of 13.68 percent from January 2020. As the number of investors who first open an account with the brokers increases as well as their average trading activities, it is important to understand how this new trend and behaviors (growth and value investing) affect stock price movements and investment portfolios.

## INVESTMENT LESSON LEARNED

With Covid-19 crisis, both the decline and the rebound took place very drastically and quickly. The pandemic brought about the bear market that lasted only 33 days, compared to the median of 302 days of the last 20 bear markets since 1920, according to Yardeni research data (Figure 2).

**FIGURE 2: S&P 500 shortest bear market of 33 days**



Source: Ahmed & Randwich, 2020

What can explain the disconnection between economic uncertainties of human life, unemployment, economic disruption on the one hand and relative positively optimistic of the stock market on the other? According to Nobel Prize-winning economist Robert Shiller (2020), the performance of the US stock market during Covid-19 pandemic seems to defy logic. Genuine news about both fiscal and monetary policy stimulus together with investors FOMO (fear of missing out) drove up the market. Investors' strong recalls and regrets about not buying at the bottom of the 2008 financial crisis might have left the impression that Covid-19 crisis is an opportunistic time. Investors who buy stocks and take more investment positions might buy into the narrative of the fast economic recovery once the pandemic passes (Hanspal, Annika, & Johannes, 2020), and consider that the lockdown provides a favorable opportunity to enter the stock market during its price crashes. While those investors who fear that the economies could be under deep recessions and long term economic and financial impacts are for longer period were hesitate to enter the market. During panic, stock price movements are beyond fundamental, and one of very important factor is investors' emotion of hope and fear that dominates market reactions. And just like anything overtime, our emotions will not last, so fear and hope will fade. It is important to be mindful of our emotions from taking irrational sell on fear and rush buying on greed (Punturaumporn, 2019). As a result, investors' reactions toward crisis due to fear can impact their wealth significantly. Lessons learned from past crises are as follows: mindful investors buy on panic, where market is less efficient; and sell on greed where market is extremely overvalued and invest long term in high quality companies to achieve sustainable investment return (Figure 3).

**FIGURE 3: Hope and Fear Investment Cycle**



Source: Punturaumporn, 2021

The S&P 500 index dropped into bear territory at the height of the pandemic around March 2020, but recovered at its quickest pace then climbed to a record high within five months on September, 2020 at 3,588 points. The sudden drop in Thai stock market also drove the Stock Exchange of Thailand (SET) to implement three circuit breakers, a halt of trading for 30 minutes during 12, 13, and 23 March, 2020. SET in 2020 achieved a new



high of 1,600.48 points on 17 January, 2020 and a new low of 969.08 on 13 March, 2020 as investor panic sold large stocks in energy, commodity and banking moving investment into safer assets such as cash and gold. By June 2020, SET index reached 1454.95, jumped back 50 percent of its March low.

Lesson learned is that, when it comes to financial market, we know that the only constant is change. No one can really predict when the stock market will crash again. It is the nature of the economic cycle, where a crisis eventually comes with a recovery, which leads to a rebound and ends in a crash. However, as seen in the past crises, the crashes tend to be of a much shorter life than the booms. And over the long term, equity investment is the asset to grow one's wealth (Siegel, 2002).

Year 2020 was the shortest bear market in the US market history, and some might wonder whether we could be experiencing the shortest bull market in 2021. So far, the market has been taking some comfort on Federal Reserve reiterated its pledge to keep short term interest rates at or near zero into 2023 even though the risk of inflation is rising. According to Bell (2021), looking back in history to gauge the sustainability of the current bull market, the previous 9 bull markets lasted an average of 5.8 years and none ended before the 3rd year started (Figure 4).

**FIGURE 4: History of the recent bull markets**

| A Look at Recent Bull Markets |               |        |                   |                   |
|-------------------------------|---------------|--------|-------------------|-------------------|
| Trough Date                   | Peak Date     | Change | Length (in Years) | Annualized Return |
| October 1957                  | December 1961 | 86%    | 4.1               | 16.2%             |
| June 1962                     | February 1966 | 80%    | 3.6               | 17.6%             |
| October 1966                  | November 1968 | 48%    | 2.1               | 20.1%             |
| May 1970                      | January 1973  | 74%    | 2.6               | 23.3%             |
| October 1974                  | November 1980 | 126%   | 6.2               | 14.1%             |
| August 1982                   | August 1987   | 229%   | 5.0               | 26.7%             |
| December 1987                 | March 2000    | 582%   | 12.3              | 16.9%             |
| October 2002                  | October 2007  | 101%   | 5.0               | 15.0%             |
| March 2009                    | February 2020 | 401%   | 10.9              | 15.8%             |
| March 2020                    | N/A           | 75%    | 1.0               | 79.4%             |

Source: Bell, 2021

## **POLICY RESPONSE BY GOVERNMENT AFFECTS FINANCIAL RECOVERY**

During Covid-19 crisis, we have seen central banks and government worldwide corresponding with massive interventions to protect the health and well-being of the financial market. Governments globally implemented series of emergency measures using fiscal (taxes and spending) and monetary (interest rate and quantitative easing) policies to alleviate the economic and health impact of the Covid-19 crisis. In various countries, we have seen stimulus money spent more aggressively and quickly this time compared to the last global financial crisis in 2008. Series of relief measures were aimed particularly at SMEs, households and employment to lessen the effects of the lockdowns. Financial supports to the public come in different ways including cash handouts, household debt holidays, soft loans, low cost loans etc. At the same time major central banks in advanced economies implemented unconventional ultra-low policy interest rate, extended debt payments to banks, reduced taxes, and supported stability of the financial market to ensure sufficient liquidity in the market.

Since the last financial crisis in 2008, U.S. Federal Reserve has implemented a nonconventional monetary policy called “Quantitative Easing” (QE) in order to rescue U.S. economy. QE is an alternative way that modern central banks have invented to spur economy in a short period of time after a crisis. In doing so, the central bank purchases long term securities (i.e. bonds, mortgage backed securities) from the open market, together with providing a lower interest rate in order to increase money supply and encourage lending and investment.

Compared to the last Global Financial Crisis in 2008, central banks have reacted more aggressively, immediately, and innovatively to solve the Covid-19 crisis. According to Investopedia site, during 2008 financial crisis, the Federal Reserve launched four rounds of QE to stop the crisis from December 2008 to October 2014. The most recent used of QE was in response to the Covid-19 crisis on March 15, 2020, so the Federal Reserve announced its QE plan of over 700 billion, buying at least USD 80 billion a month in Treasury Bonds and USD 40 billion in mortgage backed securities.

Evidence suggested that there is a positive correlation between quantitative easing policy and rising stock market in the United States (see figure 5). The unlimited quantitative easing programs during Covid-19 announced by U.S. Federal Reserve in late March certainly provided more hope than fear among investors at least in the short-run.



**FIGURE 5:** Shows that the expansion of the Fed's QE has moved with the US stock market.



Source: Snyder, 2014

Adding to the QE, policy makers, central bankers, and lawmakers have stepped up with massive stimulus packages to support economic recovery. Ample liquidity is overflowing the market, and during Covid-19 lockdowns, studies show that consumers used a lot of the stimulus money to speculate in the stock market (Fitzgerald, 2020). US equities significantly recovered from stay-at-home (i.e., Shopify, Zoom, Amazon, Netflix), technology (i.e., Tesla, Facebook, Apple, Microsoft, Google) and pharmaceutical stocks (i.e., Moderna and Pfizer), to name a few. With ultra-accommodative monetary policy by Federal Reserve, fear of US dollar depreciation rose, prompting some investors to turn to Bitcoin as an alternative store of currency investment and speculative play. Evidence from sharp spike in Bitcoin price before 2020 was over. Almost all assets (stocks, bonds, commodities and alternative assets) rallied in the past several months and could go even higher from accommodative monetary policy, economic reopening and vaccine optimism.

After Covid-19 one year anniversary, U.S. stock markets have reached new all-time highs with Dow Jones trading above 33,000 from its March 2020 low of 18,213. The S&P 500 also reached above 3,955 high from its 2,191 low in March last year. As for Thai stock; even though market rebounded to 1,584.61 from its March low of 969.08, the market has not yet reached above 2020 high of 1,604 on January 13, 2020 and still been below SET high of 1,852.51 on February 26, 2018. In response to Covid-19 crisis, Bank of Thailand cut its policy rate on 20 March, 2020 by 0.25 of a percentage point to 0.75 percent from previous 1.00 percent and May 20, 2020 by another 0.25 percentage points to a historic record low of 0.5 percent. Thai government also spent 1.9 trillion baht fiscal stimulus package in the second quarter of 2020 and another 45 billion baht stimulus package in the third quarter to help the retail sector, but the magnitude is incomparable to what we have seen in the United States. Thailand is highly reliant on local consumption, export, and tourism incomes. Thailand has been successful in preventing the spread of Covid-19 infections in 2020. According to the World Bank report, the economy has been severely impacted when the tourism and export sector that makes up close to 15 and 68 percent of the country's GDP had been hit hard, ex-

ports and private investment declined by 18.5 percent and 4.4 percent, and household consumption declined by 1.3 percent. With slower vaccine roll out and resurgence of new Covid-19 infections, Thailand tourism and local consumptions will take longer to recover and it is more slowly for the economy to come back. While in the US, vaccines boosted confidence in an economic comeback, and inflation of 4.2% in April, 2021 has accelerated at its fastest pace since September 2008 (Cox, 2021) as energy, home, car, commodities (i.e. lumber, copper, rubbers, iron ore, etc.) prices surged. Investors are rotating back into value stocks and reducing their exposure to growth and technology stocks as risen interest rate expectation increases. Despite future risk of higher inflation, rising interest rate, and QE tapering, the wealthier gets richer investing in the market during Covid-19 crisis. The poor has been hit hard and will recover more slowly from the downturn.

## CONCLUSIONS

Year 2021 Covid-19 vaccination era, vaccines have been rolled out rapidly in most wealthy nations, while much of the world is still struggling to secure enough supply. According to UNAIDS, rich nations are vaccinating one person every second, while the majority of the poorest nations are yet to receive a single dose. High income countries such as the US and EU are implementing fast vaccines roll out programs, most businesses are beginning to reopen, tourism and services industry are planning to welcome back visitors and that helps increase positive sentiments in these nations (higher GDP growth, lower unemployment rate). Covid-19 pandemic impact on economy is far from over and at a different level for rich and poor countries. In countries where growth plummeted, poverty levels are increasing and inequality is accelerating between and within countries. Covid-19 crisis not only impacts financial markets but also deepens inequality in societies.

With a more positive stance on the US economy, Federal Reserve would eventually reduce its economic stimulus packages. Last time (May 2013) when Federal Reserve announced that it may ‘taper,’ or reduce the size of its bond buying program (QE), market frightened with global bond and stock sold off sharply (Kinny & Khartit, 2020). Stock market is forward looking, its performance tends to anticipate future profitability and expectations, which have already rebounded beyond actual economic recovery. With better pandemic management, effective vaccines roll out and improving economic outlook will help increase positive sentiments and company earnings in these markets. According to investment advices suggested by Dalio (2021), as interest rate and inflationary concerns are rising, holding cash with very low to zero yield will result in negative return; thus, it is important to invest in a well diversified portfolios across different assets, currencies, and countries. As we have learned, stock market bubbles and burst will occur again today in the latest and hottest economies around the world but no one can really assert to predict the whole picture in advance; the next crisis may be caused by something new and unexpected that are being boosted by hope, excitement and fueled by leverage and abundance liquidity (Punturaumporn, 2019). To achieve sustainable return, investors must be consciously nimble to adjust (sell on greed/ hold high quality companies; buy on panic) with their investment goals in mind, keep a well diversified portfolio with selective strong earnings companies while taking advantage of the rebound during this period of continued volatility, uncertainty and possible setbacks. To create wealth, investment portfolio goal should be for long term; be patient, and appreciate the value of time.

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# **ECONOMIC CYCLE WITH MARKOV-SWITCHING VECTOR AUTOREGRESSIVE (MS-VAR) IN OIL EXPORTING COUNTRIES**

by

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## **ABSTRACT**

This study is conducted to examine an economic cycle of oil producing countries, namely Mexico, USA, Nigeria, Kuwait, Canada, Libya, Iran, Russia, United Arab Emirates, Saudi Arabia, Angola and Venezuela. Markov-switching Vector Autoregressive (MS-VAR) is used to detect the nonlinear stochastic process of the economic cycle as it provides a flexible framework which allows determining a structural break and capturing interdependencies among multiple time series. The estimated result shows the existence of a common economic cycle of the oil producing countries. However, there exists a chance of transitioning from the expansion to the recession which is equal to 0.09 due to the global economic crises and related events. Lastly, when undertake an impulse response analysis, the result shows that Russia, Iran, Nigeria and the United Arab Emirates have mildly fluctuating and extremely differing responses to the shocks in crude oil export of each country.

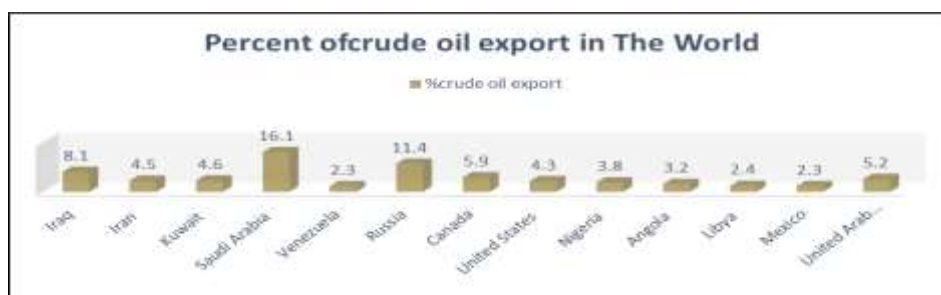
**KEY WORDS:** Economic cycle, Markov-switching, Impulse response, Structural break

## INTRODUCTION

One major contributing factor was the drop in the Brent crude oil price which is now the lowest in many years that can cause Venezuela to go through a tragic economic crisis again. This has caused curiosity in people around the world on what has caused the change in oil price and caused the quantity of global exported crude oil price to fluctuate along with it as in Figure 2. The situation in Venezuela reminds us that countries whose incomes are dependent on oil export, when enduring economic crises from oil price changes, can face a reduction in quantity of exported crude oil.

Therefore, this research studies the adjustment of crude oil export index. From Figure 1, the proportion of exports contributed by various countries across the world both inside and outside the OPEC is seen which tells the proportion of crude oil exported to the global market. The country with the biggest proportion is Saudi Arabia which export 16.1% is high level of revenue from crude oil export. So, when there are fluctuations, countries with contributions in crude oil exports can face negative effects from economic crises caused by a change in global oil price. Thus, the OPEC and the non-OPEC oil producing groups of countries faced significant fluctuations in crude oil production and exports as in Figure 2. It follows that the economic cycle of the OPEC and the non-OPEC oil producing groups can be explained by oil export index variable and various energy indexes as well as by the country's GDP because the oil export index variable and various energy indexes are categorized as leading indexes or variable indexes for forecasting the economy. However, the interesting aspect is that when there is a change in oil export index, the movement of economies in oil-producing countries inside and outside OPEC will be in the same direction (Artis, Krolzig and Toro, 2004).

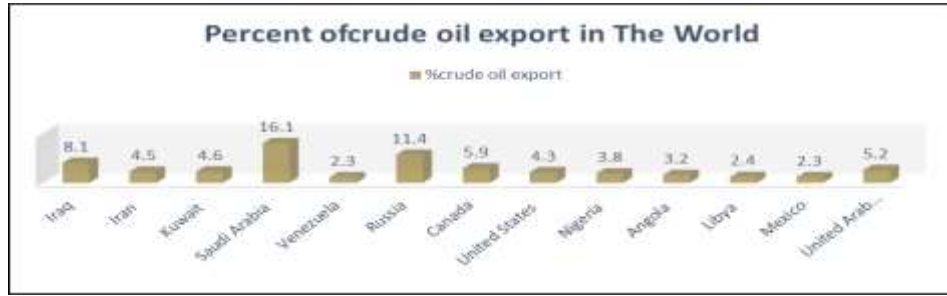
**FIGURE 1:** Proportions of crude oil export in the group of oil exporting countries in 2018.



Source: Worldstopexport (2019)

In the study of correlation of economies in countries with corresponding economic cycles which can be used in the same-time analysis, the question is: Do the member countries have economic changes that correspond with each other in the same direction? However, this study does not study how the fluctuation of macroeconomic variables affect economic cycles but in countries that export crude oil, the important variable that can drive the economies of these countries is the export of crude oil which is an important variable that can determine the economical characteristic of oil-exporting countries very well (Mork, Olsen and Mysen, 1994).

**FIGURE 2:** Quantity of Exported Crude Oil in the OPEC Group and Non-OPEC Oil-Exporting Countries from 2016-2021.



Source: CEIC Data

To measure which part of the economic cycle the economy is in, econometrics is required that can identify the probability and duration of the economy being in particular states in the economic cycle. These variables include factors relevant to oil which is used to study the movement of economic activity level in the economic cycle in the oil-exporting countries group so that the results of this study can be a guideline for planning and decision making for government, business, and households of members of oil-exporting countries.

## MODETHODOLOGY

### Principles behind the model and the model used

#### *The initial concept of the MS-VAR model*

This study applied the concept of a switching model like Markov-switching Vector Autoregressive or MS-VAR which is an econometric tool that explains data in the characteristic of non-linear data, especially when time series data is used. It can also analyze the co-movement between multiple variables, so this model can be applied to use with a high quantity of macroeconomic variables.

The MS-VAR model is a model with the assumptions that the variables used to analyze economic cycles to observe fluctuations will be under the VAR model which has different status changes (Krolzig, 1997). This can be analyzed in the same characteristics as the normal model of VAR by considering Autoregression with the order  $p$  for  $K$  dimensions of time series vectors as follows:

$$y_t = \nu + \sum_{j=1}^p A_j (y_{t-j}) + u_t$$

$$y_t = \nu + A_1 y_{t-1} + \dots + A_p y_{t-p} + u_t \quad (1)$$

Let  $y_t$  be the vector of observed values in present time,  $y_{t-j}$  be the vector of observed values in the past,  $\nu$  be the vector of a constant (Intercept Term),  $u_t$  be the vector of White

Noise Process where  $u_t \sim IID(0, \Sigma)$  and  $y_0, \dots, y_{t-p}$  are set as constants and  $A_j$  be the Lag Polynomial with dimension  $(K \times K)$  in Lag Operator  $L$  which is  $A(L) = I_K - A_1 L - \dots - A_p L^p$  which means  $y_{t-j} = L^j y_t$ . Additionally, if the normal distribution of the error is assumed to be  $u_t \sim NID(0, \Sigma)$  In equation (1), we found the intercept term equation of the Gaussian model. This allows the equation to be re-adjusted by adjusting the mean which will be in the autoregressive vector simulation model (VAR) as follows:

$$y_t - \mu = A_1(y_{t-1} - \mu) + \dots + A_p(y_{t-p} - \mu) + u_t \quad (2)$$

where  $\mu = (I_K - \sum_{j=1}^p A_j)^{-1} v$  is the mean  $y_t$  at dimension  $(K \times 1)$ . From the general figure of the autoregressive vector model (VAR Model) which is mean-adjusted (Mean-Adjusted VAR ( $p$ )) in equation (2). Where if we consider MS-VAR order  $p$  with  $M$  as the regime, we will find that

$$y_t - \mu(S_t) = A_1(S_t)(y_{t-1} - \mu(S_{t-1})) + \dots + A_p(S_t)(y_{t-p} - \mu(S_{t-p})) + u_t \quad (3)$$

where  $u_t \sim NID(0, \Sigma(S_t))$  and  $\mu_t(S_t), A_1(S_t), \dots, A_p(S_t), \Sigma(S_t)$  are parameter values which can change depending on the parameters  $\mu_t, A_1, \dots, A_p, \Sigma$  on the state of  $S_t$  that happened in real life such as:

$$\mu(S_t) \begin{cases} \mu_1 : S_t = 1 \\ \dots \\ \mu_M : S_t = M \end{cases} \quad (4)$$

From Equation (3): After the switch occurs in the states, there will be the characteristics of an Immediate One-Time Jump in the procedures of finding the mean. This sometimes means the mean is smooth after switching from one state to another state. Therefore, this model results in a Regime-Dependent Intercept Term:  $v(S_t)$  which happens as in the following equation.

$$y_t = v(S_t) + A_1(S_t)y_{t-1} + \dots + A_p(S_t)y_{t-p} + u_t \quad (5)$$

When we compare the mean between adjusted model from equation (3) and the Regime-Dependent Intercept Term model in equation (5), we find unequal results. The adjustment of the mean ( $\mu(S_t)$ ) is caused by a sudden change in time series vector which is observed at a new level, while the adjustment of constant term  $v(S_t)$  will have a Once-And-For-All Regime where the two characteristics will have the same White Noise of  $u_t$ . Assign values to unobserved variables or variables without assigned state ( $S_t$ ) where  $(S_t \in \{1, \dots, M\})$ . Preliminarily, there will be 2 states including Expansion and Recession in which the change



in  $(S_t)$  will be controlled by the Discrete State Markov Stochastic Process. This process is assigned into the form of transition possibility which is shown by the following equation:

$$P_{ij} = \Pr(S_{t+1} = j | S_t = i), \sum_{j=1}^M P_{ij} = 1 \quad \forall i, j \in \{1, \dots, M\} \quad (6)$$

For the probability density condition for being in each state, the observed vector  $(y_t)$  has the following equation:

$$p(y_t | Y_{t-1}, S_t) = \begin{cases} f(y_t | Y_{t-1}, \theta_1); S_t = 1 \\ \vdots \\ f(y_t | Y_{t-1}, \theta_M); S_t = M \end{cases} \quad (7)$$

Let  $\theta_m$  be the parameter of the VAR model under the regime  $m=1, \dots, M$  and  $Y_{t-1}$  be the lagged endogenous variables. The transition possibility will depend on the past state. Therefore, the conditioned probability of  $y_t$  will depend on  $(S_{t-1})$  with the following equation:

$$P_{ij} = \Pr(y_y | Y_{t-1}, S_{t-1}) = \Pr(y_y | Y_{t-1}) \quad (8)$$

where  $P_{ij}$  is the transition probability from state  $i$  to state  $j$  and if we combine the transition probability into a  $(M \times M)$  matrix, we get the Transition Matrix with the following equation:

$$P = \begin{bmatrix} P_{11} & P_{21} & \cdots & P_{M1} \\ P_{12} & P_{22} & \cdots & P_{M2} \\ \vdots & \vdots & \ddots & \vdots \\ P_{1M} & P_{2M} & \cdots & P_{MM} \end{bmatrix} \quad (9)$$

## Forecasting

### *Impulse Response Function*

In the impulse response analysis of the MS-VAR model, we divide the analysis into different states of the model. Therefore, the impulse response model in this study will analyze the responsiveness of variables in the model to the shocks from internal factors and other factors with the influence of states. In the evaluation of impulse response function, there must be an estimate of error from disturbing variable. In the MS-VAR model, the EM Algorithm does not estimate this value. Therefore, to estimate, we define the value of to be from the Lower Triangular Matrix of the group fluctuation matrix. In the model for

this study, there are  $k = 13$  variables and 2 states, therefore; the impulse response function of this study will equal to. The response of variables in each of the state where the response is to a One Standard Deviation Shock of internal variables and other variables at time  $t$  has the following equation (Maneejuk, 2018):

$$\left. \frac{\partial E_t y_{t+k}}{\partial u_{k,t}} \right|_{s_t = \dots, s_{t+k} = i} = \theta_{ki,h} \quad (10)$$

## DATA AND PROCEDURES

### Data Used in the Study

This study uses secondary monthly time series data from January 2015 to January 2021, equating to 73 months from a total of 13 oil-exporting countries, chosen from the world's top 13 oil-exporting countries namely: Iraq, Iran, Kuwait, Saudi Arabia, Venezuela, Russia, Canada, United States, Nigeria, Angola, Libya, Mexico, and United Arab Emirates. The variables used in this study include the quantity of crude oil export of 13 countries where the data is adjusted into growth rate terms before conducting the study.

### Procedures of Study

In the study of economic cycles of the oil-exporting countries, we start from testing the constancy of data with the nonlinear Augmented Dickey Fuller Method. In which data that shows constancy will be used to estimate constants in the Markov-Switching Autoregressive Approach (MS-AR) model to know the correlation between economic cycles of oil-exporting countries. Then, we test the MS-VAR model in various structural aspects by comparing Lag length that are appropriate for the model by considering the lowest statistical values AIC (Akaike Information Criterion) and BIC (Bayesian Information Criterion) in choosing the appropriate Lag for the model (Krolzig, 1997). Once we arrive at an appropriate model, the data is divided into 2 states with the criteria of the smoothed probability value derived from MS(2) – VAR(q) according to Artis, Krolzig and Toro (2004). If , the observed value will be categorized in economic expansion (High) and if , the observed value will be categorized in economic recession (Low). Furthermore, we must compare Table 1's models to find the coefficient of the model to conduct an event study and observe the movements of each economic cycle for each country in the oil-exporting countries group to know which direction and response the countries have to the event study that happened in the past, is happening in the present and will happen in the future.

Then, we choose the best model from Table 1 to conduct an Impulse Response study which is the analysis of the response of observed variable when there are shocks within 1 standard deviation in the variable , which is the main observed variable, and in other variables. Wherein the Impulse Response will study 2 states including economic expansion and economic recession for all models.

## RESULTS

Before conducting data analysis by various models, we must first conduct a preliminary data test to determine whether the time series data has the characteristic of constancy.

From the constancy test via nonlinear ADF Test, due to the page limit, the nonlinear ADF is not reported. However, our results show a strong evidence of stationary of our variables. So, the data can be used for further analysis with the models in the group MS-VAS. The study of economic cycles in the oil-exporting countries group has been divided into 3 important topics including:

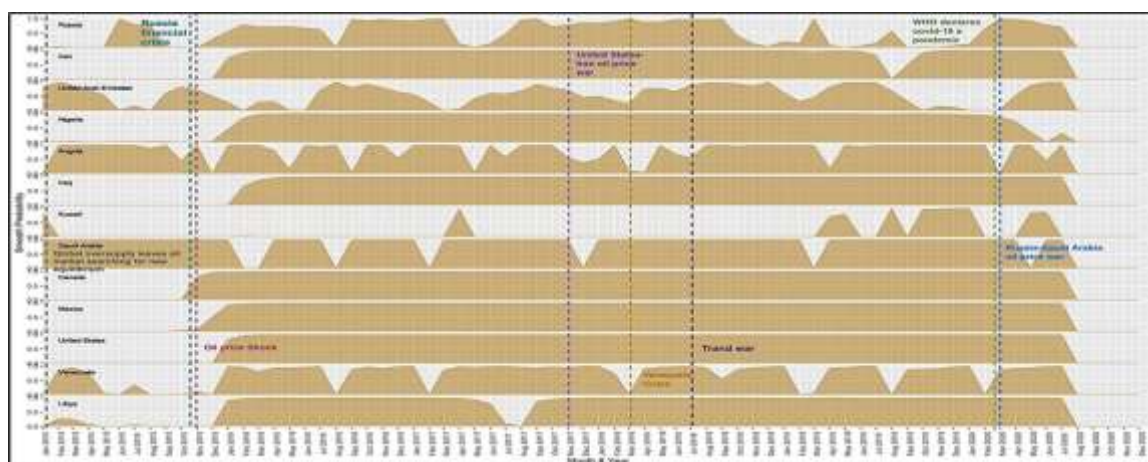
### **Economic Cycle Correlation in the Group of Oil-Producing Countries**

In the study of correlations between economic cycles of oil-producing countries, we consider the economic cycle of each country in the group by analyzing with MS-VAR models. For the duration of economic cycles, Iraq has the longest economic cycle, staying in economic expansion for around 14 months while Mexico, the United States, Nigeria, Kuwait and Canada stayed in economic expansion for around 10 months, Libya and Iran staying in economic expansion for 5-6 months. Russia and the United Arab Emirates staying in economic expansion for around 3 months, and Saudi Arabia, Angola and Venezuela stayed in economic expansion for around 1 month. In each economic cycle, Iran and Nigeria have the average duration of economic recession at 49 months, Libya at 32 months, Saudi Arabia at 9 months, United Arab Emirates, Angola, and Venezuela at 4 months, Kuwait at 1 month, and Canada, Iraq, Mexico and the United States are in infinite economic recessions.

The preliminary study has shown that the economies in the oil-producing country group have the same proportion of countries in economic expansion and economic recession, so we can choose to study either of the economic states. This study has chosen to study economic recession to observe when countries in oil-producing countries group enter economic recession and whether the timing correlate. The study results of economies of oil-producing countries during economic recession can be shown in Figure 3.

Figure 3 shows the Smoothed Probability of economic recession which can be estimated by the MS-VAR model wherein the probability range between 0 and 1 and the division of observed value or data is into 2 states including economic expansion and economic recession. (Artis, Krolzig and Toro, 2004) The study of the Smoothed Probability of economic recession found that the period of study, which is from January 2015 to January 2021, when there is a major global crisis, countries in the oil-producing countries group are normally affected by the global economic crisis in directions that correlate with each other where there are corresponding changes into economic recessions.

**FIGURE 3:** Economic Cycles in the Oil-Producing Countries Group (receding oil supplies).



*Note:* Estimated from Smoothed Probability from the MS-AR(5) model.

For example, the oil price crisis in 2015 was a crisis that affected every country in the oil-producing countries group. Every country in the oil-producing countries group faced economic effects from the crisis but entered their own oil price crises at different times. After 1 to 2 months, the rest of the countries had entered the oil price crises in December 2015 to January 2016, namely Libya, United States, Venezuela, Iraq, Nigeria and Iran, and were affected in the following period. Additionally, Kuwait entered the crisis in February and was affected until May 2017. From Figure 3, we can see that every country in the oil-producing countries group was affected and entered the economic recessions except Kuwait which did not face any effects in this crisis. Both events have affected various countries in the oil-producing countries group, but each country has its own time of being affected by the crisis. During March 2020, most countries in the oil-producing countries group have faced the effects of the crisis including Canada, Russia, the United Arab Emirates, Angola, Mexico, Saudi Arabia, Libya, the United States, Venezuela, Iraq, Nigeria and Iran in the following period.

The study results found that various global economic crises are the major cause of economic recession in the oil-producing countries group affected from the crisis in the same direction. Therefore, we can say that countries in the oil-producing countries group have correlating economic directions which can be divided into 2 main groups: 1. Members of the group of countries with economic cycles that correspond to crises that happened or affected OPEC group 2. Member of the group of countries with economic cycles that correspond to crises that happened in the non-OPEC group. However, different member countries have different economic policies under their own independent regulation to handle the economic crises and have low levels of collaborated international economic policies to handle the economic crises. This caused each country to face different duration of effects from the economic crises and also caused them to take different time to experience economic expansions after the economic crises of each country was over.

***Economic cycles of the group of oil-producing countries in structural aspects, considered from the quantity of crude oil export***

**TABLE 1.** Estimations from the MSIAH(2)-VAR(1) model.

| <i>Regime-dependent intercepts</i>                           | Russia               | Iran              | United Arab Emirates | Nigeria    | Angola     | Iraq       | Kuwait     | Saudi Arabia | Canada     | Mexico     | United States | Venezuela  | Libya      |            |
|--------------------------------------------------------------|----------------------|-------------------|----------------------|------------|------------|------------|------------|--------------|------------|------------|---------------|------------|------------|------------|
| Regime1                                                      | 0.0013               | -0.0568           | 0.0038               | 0.0069     | -0.0033*   | -0.0006    | 0.0042     | -0.0027      | 0.0085**   | -0.0008    | 0.0467        | -0.0173    | -0.0011    |            |
| Regime2                                                      | -0.00003             | -0.0270           | 0.0018               | 0.0070     | -0.0017    | -0.0021    | 0.0018     | 0.0010       | -0.0025    | 0.0069     | 0.0022        | -0.0108    | -0.0429    |            |
| <i>Regime-independent Autoregressive parameters at lag 1</i> | Russia               | Iran              | United Arab Emirates | Nigeria    | Angola     | Iraq       | Kuwait     | Saudi Arabia | Canada     | Mexico     | United States | Venezuela  | Libya      |            |
| Regime1                                                      | Russia               | 0.3245***         | 6.1152***            | -0.1942    | 1.0839***  | 0.1182     | 0.1953     | 0.1293       | 0.5043***  | -0.3575**  | 0.0626        | -2.7019**  | 5.3156***  | 5.8565***  |
|                                                              | Iran                 | 0.0106            | -0.0964              | -0.0682*** | 0.0539**   | -0.0125    | -0.0321    | 0.0207       | -0.0429*** | 0.0065     | -0.0349**     | 0.0570     | -0.0899    | 0.2992***  |
|                                                              | United Arab Emirates | -0.0084           | -1.5788***           | -0.4383*** | 0.1379     | -0.3964*** | 0.5398***  | 0.0078       | 0.2543***  | 0.5079***  | -0.2723***    | 2.7709***  | -1.2756*** | -0.1108    |
|                                                              | Nigeria              | -0.1261***        | -1.3269***           | 0.0721     | -0.3708*** | -0.3033*** | -0.2935*** | 0.0904*      | -0.2916*** | 0.0340     | 0.0507        | 0.8997***  | -1.2895*** | 0.4162     |
|                                                              | Angola               | 0.1225*           | 0.9370               | -0.1117    | -1.2673*** | 0.0272     | 0.4198**   | -0.0446      | -0.0002    | -0.2103*   | -0.2622       | -2.0853**  | 1.8321**   | 1.1861     |
|                                                              | Iraq                 | 0.0958**          | 2.4531***            | 0.1544     | -0.2118    | 0.6189***  | -0.6594*** | 0.0425       | 0.2627***  | -0.0917    | -0.2292**     | -3.8925*** | 2.6294***  | -0.2028    |
|                                                              | Kuwait               | 0.5648***         | 2.7828***            | -0.0637    | -0.7475*** | 0.8706***  | 0.4545***  | -0.3218***   | 0.6412***  | 0.0293     | -0.2419*      | -2.4806*** | 4.3648***  | 0.7342     |
|                                                              | Saudi Arabia         | 0.0937            | -1.9035**            | 0.3070**   | 0.0505     | -0.0625    | 0.1052     | 0.1103       | -0.5340*** | 0.3758***  | -0.4847***    | 2.1458**   | -1.0410*   | -0.5993    |
|                                                              | Canada               | <b>0.4830***</b>  | 3.7412***            | -0.1148    | 0.1703     | 0.3221**   | -0.4463**  | 0.4143***    | 0.2351     | -0.2637**  | -0.2505       | -1.5566    | 1.2565     | -1.0067    |
|                                                              | Mexico               | 0.2260***         | 1.2718***            | 0.1951***  | 0.0960     | 0.1105*    | 0.1524     | -0.0894      | 0.3381***  | 0.0145     | -0.3289***    | -0.2751    | 1.5666***  | 1.0530**   |
|                                                              | United States        | <b>-0.1323***</b> | 0.2246               | -0.1561*** | -0.1399*** | -0.0962*** | 0.0325     | -0.0729***   | -0.1599*** | -0.0984*** | 0.1324***     | -0.0397    | -0.5263*** | 0.9968***  |
|                                                              | Venezuela            | -0.2000***        | 0.1281               | -0.1309*** | 0.0105     | -0.0707**  | -0.1970*** | -0.0953      | -0.1077*** | -0.1858*** | 0.2438***     | -0.2631    | -1.1357*** | -0.8169*** |
|                                                              | Libya                | 0.0161**          | 0.0435               | 0.0381***  | -0.0860*** | -0.0033    | 0.1226***  | 0.0331**     | 0.0472***  | 0.0790***  | -0.0248       | 0.3776***  | 0.0698     | -0.2050**  |

**TABLE 1.** (Continued 1).

| <i>Regime-dependent intercepts</i> |                      | Russia     | Iran       | United Arab Emirates | Nigeria    | Angola     | Iraq       | Kuwait     | Saudi Arabia | Canada     | Mexico     | United States | Venezuela  | Libya      |
|------------------------------------|----------------------|------------|------------|----------------------|------------|------------|------------|------------|--------------|------------|------------|---------------|------------|------------|
| Regime2                            | Russia               | -0.3326*** | 6.4751***  | -1.1992***           | 0.0491     | -0.1951    | 0.3468***  | -0.7306*** | -0.1463      | -0.5251*** | -0.5622**  | -1.5902**     | 1.1556     | 6.9840***  |
|                                    | Iran                 | -0.0082    | 0.2634***  | -0.0744***           | -0.0989*** | 0.0748***  | 0.0147*    | -0.0297**  | -0.0058      | -0.0661*** | 0.0845***  | -0.5481***    | 0.2711***  | 0.2508***  |
|                                    | United Arab Emirates | 0.1841***  | -1.0670**  | -0.4033***           | 0.5453***  | 0.1251     | -0.0564    | 0.0116     | 0.3632***    | 0.1113*    | -0.0603    | -0.9163***    | 1.9682***  | 1.0506*    |
|                                    | Nigeria              | -0.1122*** | -1.0152*** | -0.1559***           | -0.6934*** | -0.3522*** | -0.2365*** | -0.1379*** | -0.0714**    | 0.1240***  | -0.1815*** | 2.4075***     | -1.5948*** | 0.8024**   |
|                                    | Angola               | -0.1293**  | 2.6465***  | 0.3943***            | -1.4901*** | -0.2098    | 0.2432***  | -0.0622    | -0.2224**    | -0.3983*** | 0.4435**   | -2.0087***    | -1.2238**  | -3.9899*** |
|                                    | Iraq                 | -0.1214**  | 3.6752***  | 0.5852***            | 0.0308     | 0.6163***  | -0.0631    | -0.0734    | -0.0659      | -0.0943    | 0.6344***  | -3.1889***    | 1.6812***  | -3.5514*** |
|                                    | Kuwait               | 0.3019***  | 0.2747     | -0.0823              | 0.3122*    | 0.2753**   | -0.0405    | 0.0429     | 0.4077***    | 0.0630     | 0.3756***  | 0.5155        | -0.1319    | 1.6789**   |
|                                    | Saudi Arabia         | 0.0612     | -0.2542    | 0.2125               | 1.3160***  | 0.2081*    | -0.4415*** | 0.3378***  | -0.2979***   | 0.2922***  | 0.3089**   | 2.1332***     | 0.5501     | -1.1608    |
|                                    | Canada               | 0.1849**   | -2.3771*** | -0.1138              | 0.5420**   | -0.0566    | 0.1342     | 0.5041***  | -0.1224      | -0.2516**  | 0.3830**   | 0.3224        | -0.3741    | -1.1228    |
|                                    | Mexico               | 0.1639***  | 1.1037***  | 0.2683***            | 0.2245**   | 0.3828***  | -0.0043    | 0.1695***  | 0.2208***    | 0.1186**   | -0.3007*** | -1.9224***    | 2.0273***  | -0.5831    |
|                                    | United States        | 0.0224*    | 1.1971***  | 0.0423               | -0.2849*** | 0.0370     | 0.1182***  | -0.0134    | -0.0157      | 0.0002     | 0.0864**   | -0.2948***    | 0.0496     | 0.4591**   |
|                                    | Venezuela            | -0.0467*** | -0.1426    | -0.0660*             | -0.0606    | -0.0912*** | -0.0056    | 0.0101     | -0.0353      | 0.0394     | -0.0922**  | 0.6168***     | -0.6778*** | 0.1439     |
|                                    | Libya                | 0.0364***  | -0.1688**  | 0.0790***            | -0.0263    | 0.0352***  | 0.0007     | 0.0774***  | 0.0853***    | 0.0341***  | 0.0346**   | -0.0608       | 0.3170***  | -0.5472*** |
| Log-likelihood                     |                      | 1078.454   |            |                      | AIC        |            |            | -14.942    |              |            | BIC        |               |            | 2.522      |
|                                    |                      | $p_{it}$   |            | $p_{2t}$             |            | Duration   |            |            |              |            |            | Observation   |            |            |
| Regime 1                           |                      | 0.97       |            | 0.03                 |            | 34         |            |            |              |            |            | 37            |            |            |
| Regime 2                           |                      | 0.03       |            | 0.97                 |            | 34         |            |            |              |            |            | 36            |            |            |

Notes: “\*\*\*”, “\*\*”, and “\*” mean statistical significance level of 0.01, 0.05, and 0.10.

The model used in this study is the MSIAH(2)-VAR(1) model which we conducted the study in 2 states: economic expansion (Regime 1) and economic recession (Regime 2) at lag 1. From table 1, we found that the Intercept Term of Regime 1 has about the same number of positive values and negative values in which the negative values that appear in Regime 1 are significantly less negative than the negative values in Regime 2 for the quantity of exported crude oil in all countries in the oil-producing countries. The opposite Intercept Term that economic recession (Regime 2) has is positive but less positive than Regime 1 and sometimes has negative values for some countries which corresponds with the assignment of Regime 2 as countries with economic recessions.

From Table 1, we found that the probability of a transition from Regime 1 to Regime 2 equals to 0.03 but the probability of staying in Regime 1 equals to 0.97 where the duration of status continuation is 34 months. The probability of a transition from economic recession to economic expansion equals to 0.03 but the probability of staying in Regime 2 equals to 0.97 where the duration of status continuation is 34 months. Furthermore, the study also shows Autoregressive Parameters which can explain the influence or co-dependencies of quantity of crude oil export in various countries in the oil-producing country group where the Autoregressive Parameters in this study have 2 states. We found that there are changes in both Regime 1 and Regime 2 wherein most of the quantity of crude oil exported in various countries in the oil-exporting countries group have influence over each other. For example, 3% of the change in quantity of crude oil export in Russia happened during Regime 1, causing the quantity of exported crude oil from each country to move in different direction where Iran, Nigeria, Saudi Arabia, Venezuela, Libya in the next months changed by 6.12%, 1.08%, 0.50%, 5.31%, and 5.86% in the same direction respectively at the significance level of 0.01. For Canada and the United States, in the following month, there were changes of -2.70% in the opposite direction with the significance level of 0.05.

**FIGURE 4:** Graph Showing Economic Cycle of Oil-Producing Countries Group in Structural Aspect, Considered by Quantity of Crude Oil Export.

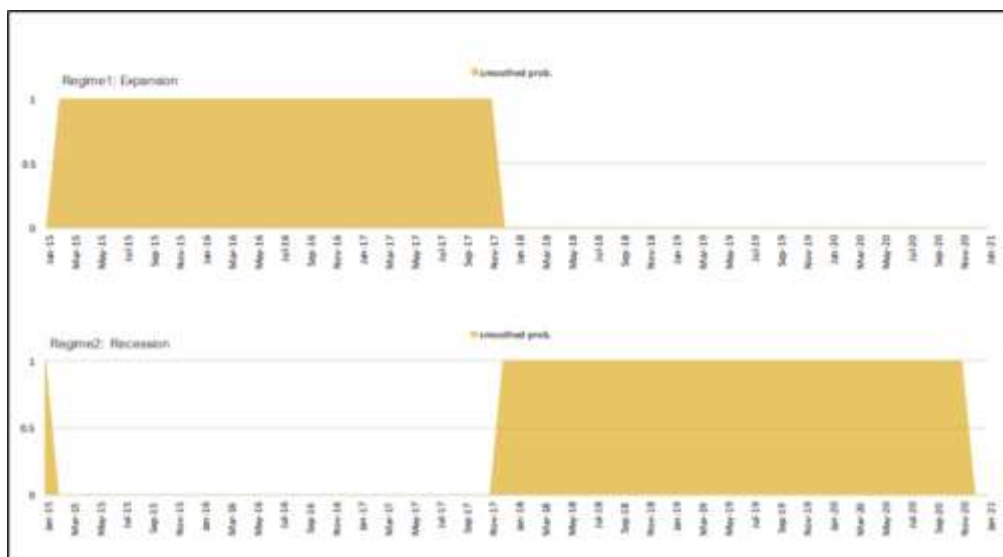


Figure 4 shows Smoothed Probability of economic expansion and economic recession which have the probability in the range 0-1 (Artis, Krolzig and Toro, 2004). From Figure 4, we found that during the period of study from January 2015 to January 2021, the economy of the oil-producing country groups was in economic expansions for 34 months which equates to 50% and in economic recession for 34 months which equates to 50% with consequential economic recession from the end of 2018 to November 2021. After the United States has started a Sanction, many countries who buy crude oil have followed the policies in the United States, causing the demand for crude oil in Iran to reduce, and the quantity of exported crude oil to reduce significantly. Afterward in 2019, the trend for oil price kept rising due to the disappeared supply from Iran and the demand for crude oil which is expected to rise compared to the demand in the year 2019. At the same time, the downside risks of oil prices are the risks that happen from a trade war between China and the United States which can affect the global economy with reducing demand for oil. Furthermore, if the price of oil remains constant at a high price, the demand for oil can reduce, especially in EM countries with a high growth in the demand for oil. However, the supply from the United States will increase after the 2nd quarter when oil delivery pipes are opened which can affect the elasticity of supply in the global oil market to reduce in the 3rd and 4th quarter of the year 2019.

### **Forecast of Economic States**

In the forecast of economic states in oil-producing countries, we analyze the impulse response to see the response to impulses of different crude oil export variables in oil-producing countries that happened because of the shocks in crude oil exports quantity variables in other countries.

The result of Impulse Response Analysis in the oil-exporting countries group, analyzed from the quantity of crude oil export as shown in Figure 5 and Figure 6, found that in each economic state, both in oil supply expansion and oil supply contraction, the response to shocks that happen to quantity of crude oil export in oil-exporting countries are different. In the case of economic states both with expanding oil supply and contracting oil supply (Figure 5 and Figure 6), when a shock happens within 1 standard variation per quantity of exported crude oil for each country, we found that the member countries have similar patterns of fluctuating quantity of crude oil export in response to shock. When we consider the response to shocks that happened, we found that the quantity of exported crude oil that changed will return to normal states after 15 months.

Preliminary study results found that countries with severe response to shocks and are in the states of oil supply expansion include Russia, Iran, and the United Arab Emirates. When there are shocks within 1 standard deviation from the quantity of exported crude oil of the 3 countries, we found that the 3 countries' response to shock are highly severe and fluctuating. When there are shocks within 1 standard deviation from the quantity of exported crude oil for the 3 countries, we found that the 3 countries' response to shock are highly severe and fluctuating.

### ***Impulse Response Analysis Results***



**FIGURE 5:** Result of Impulse Response (oil supply expansion)

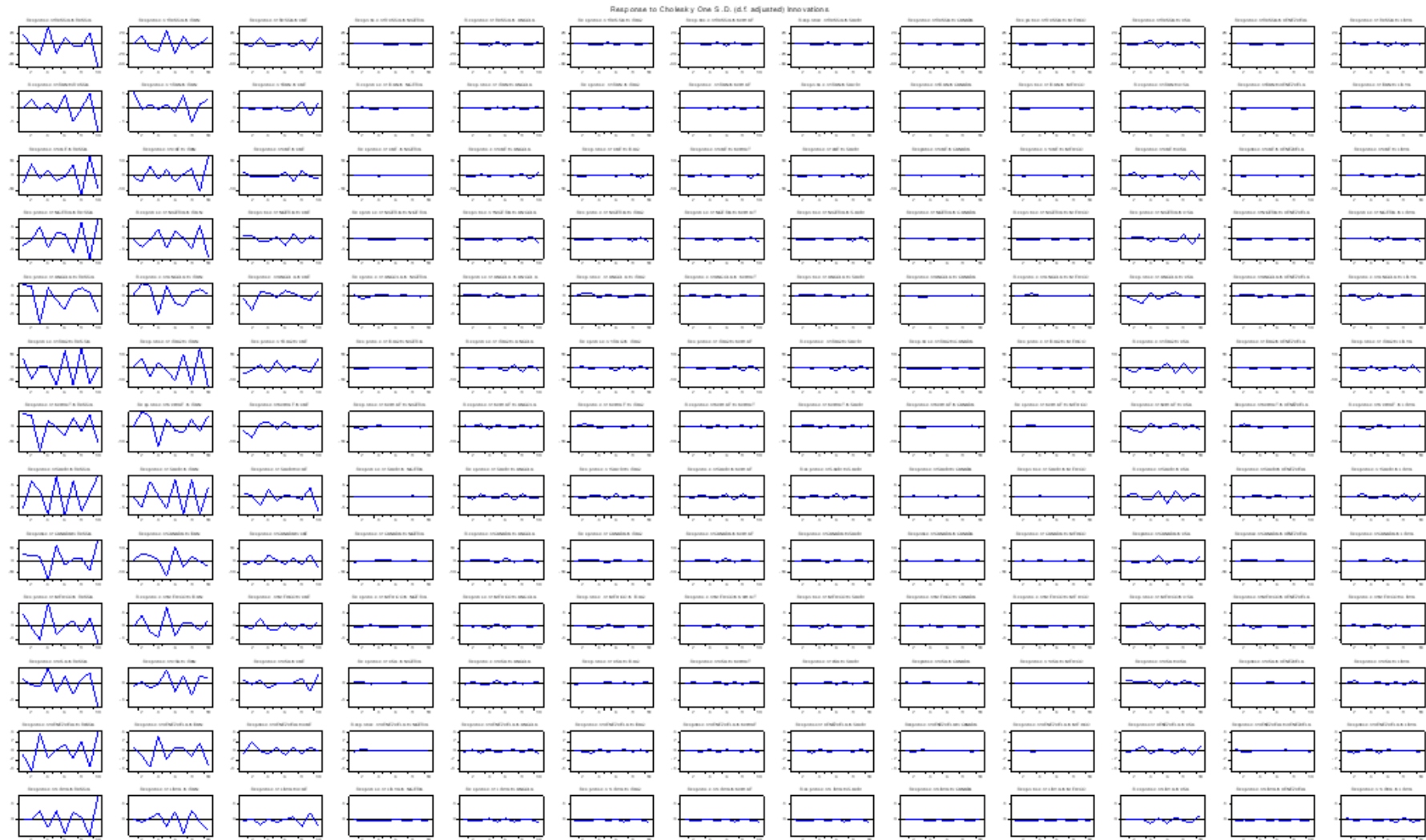
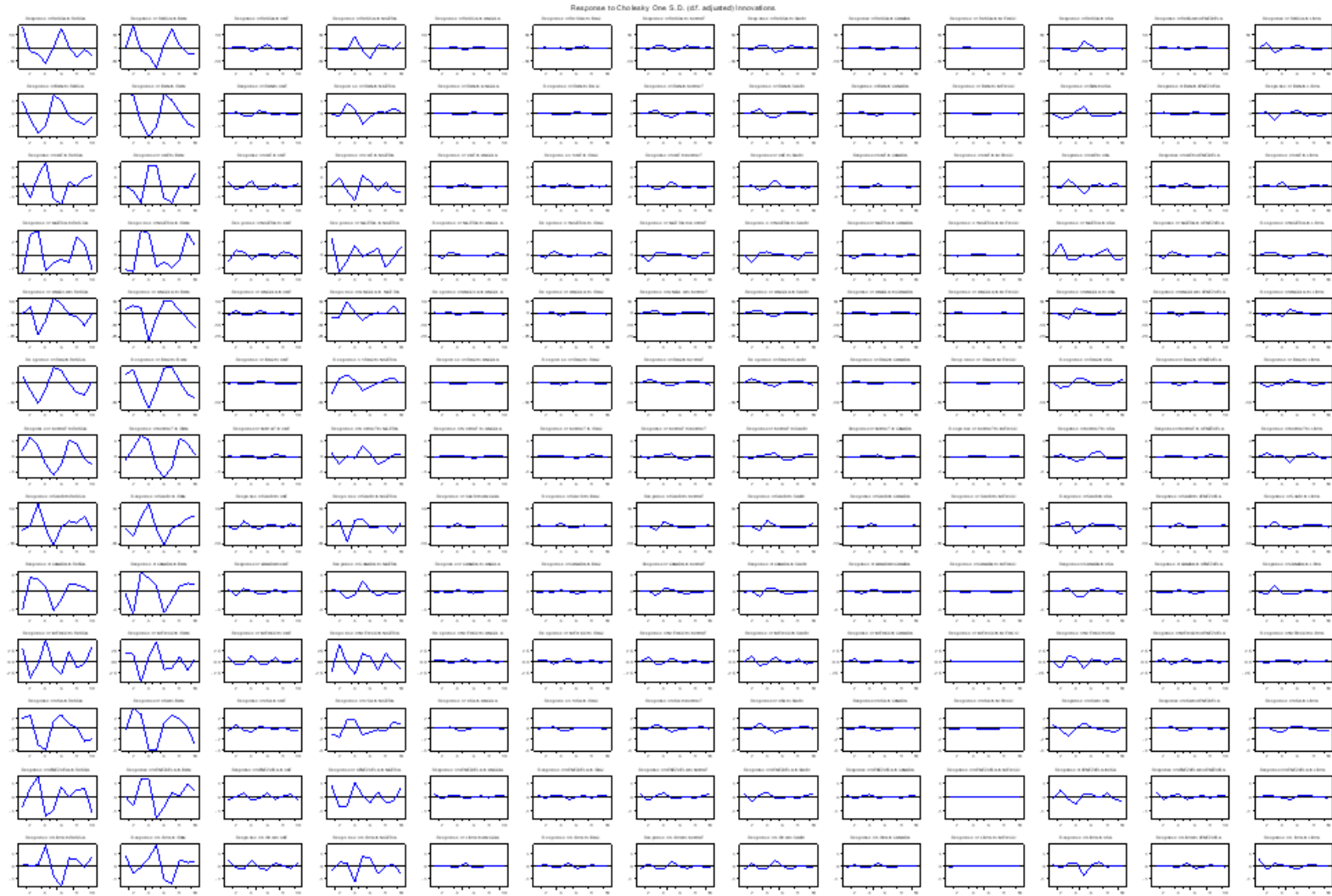


**FIGURE 6:** Result of Impulse Response (Oil Supply Contraction).



## CONCLUSIONS

The study of economic cycles in the group of oil-producing countries aims to study characteristics of the relationship of economic cycles and response to sudden changes in crude oil exports of oil-producing countries, via using the MS-VAS model together with economic index variables including exported crude oil quantity, found that when analyzed country by country in the group of oil-exporting countries, the economic cycles are quite correlated where many countries entered economic recession after being affected by global economic crisis in the same direction. However, every country in the oil-producing countries group had responses to economic crises in the same directions; therefore, we conducted a study of economic cycles in oil-producing countries group in the structural aspect and found that the model MSIAH(2)- VAR(1) is the model with the most appropriate structure to explain the economic cycles of oil-exporting countries that are analyzed from crude oil export variables. We found an equal level of economic expansion and economic recession in the oil-producing countries group where in each economic cycle, the group of oil-producing countries leaders experienced constant economic status of expanding economy that lasted for about 34 months with the probability of 97% and stayed in the recession economic states continuously for 34 months before adjusting into the next expansion phrase. Furthermore, the study also found that the global economic crisis is a major factor affecting the economies of member countries of the oil-producing countries group to change state from expansion to recession.

Furthermore, we conducted an impulse response study in the next section and found that Russia, Iran, Nigeria and the United Arab Emirate have mildly fluctuating and extremely differing responses to the shocks in crude oil export of each country. This is due to the influence of member-countries. Both in the supply expansion phase and supply contraction phase, there are fluctuations in response to the occurred shocks before returning to normal states in the subsequent time.

In summary, the countries in crude oil-producing countries have faced an economic slowdown. The main causes are from global economic crisis and the current epidemic of disease. Each country in the group of crude oil-producing countries entered the economic crisis at the same time, but had a different period of impact from the economic crisis. However, the countries in the crude oil-producing countries have the same period of economic expansion as the economic slowdown.

## POLICY RECOMMENDATION

From analyzing the economic cycle of each country in the oil-producing countries group, we found that each country has an economic cycle that corresponds to each other since they had similar entrances into economic recession and were affected in the same direction by economic crises. In the future, this might result in more corresponding policies between countries, for example, determining the number of crude oil exports of each country to meet the market demand in order to reduce the occurrence of excess demand that will affect the risks that will arise in the event of the global economic crisis and cause a grouping into a prosperous group to handle the next economic crisis in the future and to drive the economies of member countries in the oil-producing countries group to move in the same directions.

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# TECHNICAL AND SCALE EFFICIENCY OF THE PUBLIC HOSPITALS IN PAPUA NEW GUINEA

by

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## ABSTRACT

Hospitals are the largest organization that consumes a larger share of the health resources in the country. It is therefore imperative that the resources allocated to the health sector, are put to optimal use. This study used the output-oriented Data Envelopment Analysis (DEA) technique to estimate the efficiency of 20 public hospitals in Papua New Guinea. The study was further extended using the Tobit regression analysis to investigate other contextual factors on hospitals efficiencies. The results indicated that 7 hospitals were inefficient and the average variable returns to scale technical efficiency score was 92%. Among them, 2 hospitals operated under increasing return to scale implied that they need to increase their scale of operation while the rest 5 hospitals operating under decreasing return to scale implied that they need to reduce the scale of operation. The inefficient hospitals could have augmented their outpatient visits by 89, 058 and inpatient discharges by 8,364 without changing their inputs used. The ratio of bed to nurses (RoBTN), the ratio of bed to doctors (RoBTD), and hospital size (BED) were significantly correlated with the hospitals' inefficiencies at a 5% level of significance ( $p < 0.05$ ). It is recommended that from the available number of beds; the hospitals must have additional nurses to attend to patients per bed effectively to minimize the inefficiency.

**KEY WORDS:** Technical efficiency, Public Hospitals, District Hospitals,  
Data envelopment Analysis

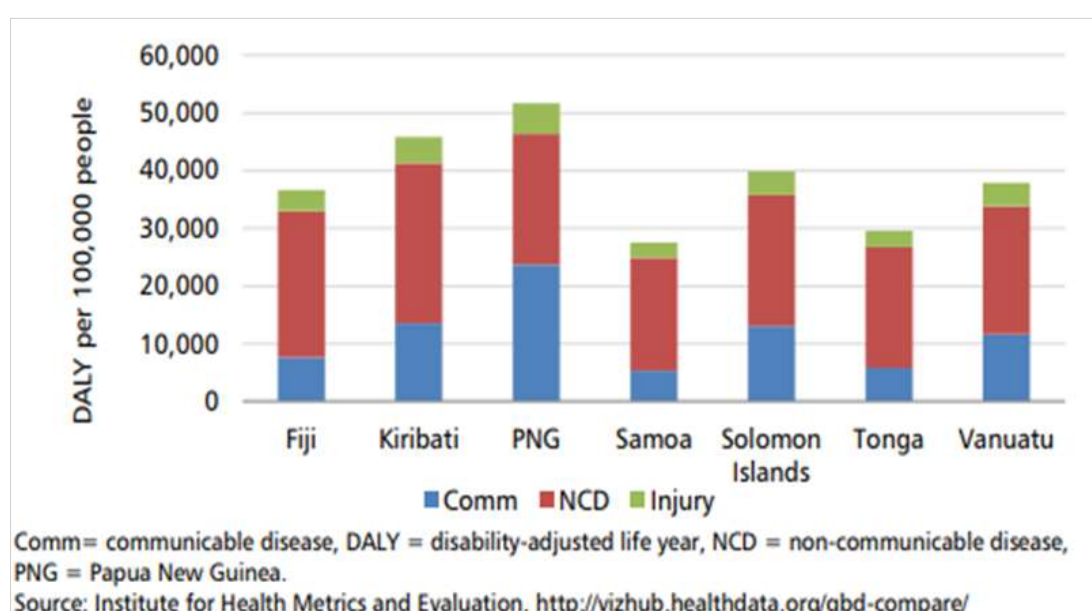
## INTRODUCTION

Papua New Guinea is located south of the equator and it's about 160 km towards the north of Australia. It is part of the arc mountains stretching from Asia, through Indonesia into the South Pacific, and consists of more than 600 islands. The Papua New Guinea population is estimated at 7.06 million, with a national growth rate of 2.83 percent between 2000 and 2011. Almost 80% of the people are living in rural areas while 20% of them are living in urban centers mainly cities and towns (National Department of Health 2012).

It is a lower-middle-income country with an economy being heavily dependent on the natural resources sector. It has complex geography – with large areas of the country accessible only by foot, air, or boat. The country is classified into four geographical regions of the highlands, Islands, Momase, and the Southern region. Administratively, the country is made up of 22 provinces, 89 districts, and 318 rural local-level governments (LLGs), and 31 urban LLGs.

Papua New Guinea has the highest health problems in the Asia Pacific Regions in terms of the burden of diseases as shown in figure 1.1. Infectious diseases like malaria, tuberculosis, diarrhoeal diseases, and acute respiratory disease are significant causes of morbidity and mortality. Prevalence of non-communicable diseases (NCDs) are most common in many parts of the communities in the country. Rates of infant and child mortality and maternal mortality are high compared to other countries in the Asia Pacific Region (“Health Sector Assessment”, n.d).

**FIGURE 1:** Burden of disease in selected Pacific Island Countries in The Current Health



Roughly 41% of male and 49% of female deaths in Papua New Guinea are due to infectious disease. Almost 45% of male and 42% of female deaths arise from NCDs. Infectious diseases, maternal, neonatal, and nutritional conditions account for more than half of the deaths especially in parts of the country with low socio-economic status (Kitur, Adair, Riley, Lopez, 2019).

## LITERATURE REVIEWS

In the past three decades, health care efficiency has emerged as an issue of greatest interest to many governments and private sectors. A growing number of countries have undertaken health facility efficiency studies to guide the development of interventions to avoid wastage of health resources. Since 2000, a number of African countries (Ethiopia, Gambia, Kenya, Namibia, Ghana, Nigeria, and Eritrea) did several studies to assess the efficiency of healthcare facilities by using data envelopment analysis (DEA). Among them, few Asian countries including Bangladesh and Palestinian. These studies demonstrated that DEA is an important tool for policy advice. To date, no health facility efficiency study has been conducted in Papua New Guinea.

However, there is a significant knowledge gap in the use of DEA to measure and estimate the efficiency of the facilities in PNG. The studies on the efficiency of the facilities are very limited or non except by (Demir, Pulford et al. 2017) which investigated the utilization of health resources at the upper primary and secondary level facilities using ratio analysis methods such as bed occupancy ratios, input-output ratio, and cost output ratios. The study identified that upper secondary level facilities had allocated adequate resources than the upper primary facilities. It was recommended that necessary resources requirements at each of the facility levels must be provided to ensure the facilities are more efficient and fully functional at all times. More training institutions and facilities must be upgraded to meet the upper primary facilities' needs in terms of health personnel.

Many empirical studies in other countries aimed at measuring the efficiency of health care delivery units using Data Envelopment Analysis. Most of these studies in the literature are found in the African continent which focused on efficiency measurements of health institutions such as hospitals, district hospitals, and health centers. These include Ethiopia (Ali, Debela et al. 2017), Gambia (Jarjue, Ghani et al. 2015), Kenya (Kirigia, Emrouznejad et al. 2002), Namibia (Zere, Mbeeli et al. 2006), Ghana (Osei, d'Almeida et al. 2005, Akazili, Adjuik et al. 2008), Nigeria (Awara and Susan 2019) and Eritrea (Kirigia and Asbu 2013). Among them, few Asian countries including Bangladesh (Ahmed, Hasan et al. 2019) and Palestinian (Sultan and Crispim 2018).

The potential measurements of hospital inputs commonly used in the studies include the number of staff (both clinical and non-clinical) as a proxy to the labor input and the number of beds as a proxy to the capital input. Other additional inputs such as the cost of drug supplies, foods, and health expenditures in their analysis are also used by (Osei, d'Almeida et al. 2005, Akazili, Adjuik et al. 2008) and (Ali, Debela et al. 2017) in their studies.

On the other hand, outpatient visits and inpatient days or discharge were commonly used as the output variables with the inclusion of few individual programs such as immunizations, emergency care, antenatal care, deliveries, children immunized, family planning visits. In PNG, output data is reported as aggregated inpatient discharge and outpatient visits.

In **Namibia**, Zere et al. (2006) used the CCR model for the study. The study estimated that average technical efficiency scores ranged from 62.7% to 74.3%. Less than 50% of the hospital were efficient. The rest of them were inefficient due to the presence of pure and scale efficiency. However, the use of the government's recurrent expenditure for wages and salaries to the input combination was very challenging. The expenditure didn't give a

clear picture of the types of staff in the facilities to disaggregate the salary component. A hospital with highly trained health personnel will bill a higher salary level even if the number of staff is small. This was not disaggregated due to a weak information system. That means findings under this scenario had not provided a clear policy guideline relevant for staffing in the hospitals even though the results revealed it required input reduction to be efficient.

Another study in **Ghana** (Akazili, Adjuik et al. 2008) used an input-oriented BCC model identified that the degree of 89 randomly selected facilities performances was not efficient. The results have broadly indicated that the main issue of endemic inefficiency in the health care delivery system of public health centers was because of the underutilization of the input resources. The study suggested that significant amounts of resources could have been saved if measures were put in place to curb and avoid such waste.

The study (Jarjue, Ghani et al. 2015) in **Gambia** used an output-oriented BCC model. There was a disparity in the number of staff as it was evident from the analysis that the total number of staff per health center ranged from 7 to 134. This disparity was due to the size, geographical location, and catchment area of the health center. The mean output for both inpatient and outpatient variables in the two years was 547.84 and 26,596 respectively.

According to the results, there was widespread inefficiency in the Gambian secondary health care service delivery as the mean efficiency score is 0.65 (65%) which is less than 1 (100%) and a standard deviation of (26%). Generally, Gambian Secondary health services had done very poorly except 37% had an efficiency score above 0.80, which means that health centers were not efficient. They must obtain a score of 1 (100%) to be fully efficient.

Among the literature reviewed, (Kirigia and Asbu 2013, Mujasi, Asbu et al. 2016, Ali, Debela et al. 2017, Sultan and Crispim 2018, Ahmed, Hasan et al. 2019, Awara and Susan 2019) had extended their investigations using a statistical model to identify other contextual and institutional factors such as population size, hospital size, locations, the average length of stay, bed occupancy rate, etc. that affected the efficiency of the hospitals. The efficiency scores from the DEA analysis were regressed against the environmental and contextual factors to investigate the possible impacts on the inefficiency of the hospitals.

Ahmed et al. (2019) used an input-oriented DEA BCC model to estimate the efficiency of 62 district hospitals in **Bangladesh**. The DEA results revealed that the general performance of the hospital was high because of the high utilization of resources despite some inefficiencies that existed with the individual comparisons of their efficiency scores. However, the Tobit results identified that hospitals with a target population of over 2.5 million had higher technical efficiency compared to hospitals with a target population of less than 1 million. Besides, hospitals situated at locations with a higher poverty headcount (15-30%) had higher efficiency than with less (<15%) poverty headcount. Moreover, the technical efficiency score of hospitals also increased with the increment of bed occupancy ratio and the ratio of beds to physicians and nurses.

A similar study by Sultan & Crispim (2018) using an input-oriented BCC model estimated and investigated the efficiency of the 11 **Palestinian** Hospitals. The DEA method findings showed that potential savings of 15% of resource consumption were made without reduc-



ing the volume of current health services provided. However, the Tobit model revealed that bed occupancy rate (BOR); the outpatient-inpatient ratio (OPIPR); hospital's size (SIZE); and the availability of primary healthcare centers within the hospital's catchment area (PRC) had influences on the hospital efficiencies. Among these factors, OPIPR has a significant impact on the performance of the hospitals. Every 1 unit increase in OPIPR resulted in a reduction of inefficiency by 19%. Palestinians have limited studies in hospital performance, the results may become the blueprint for policy and planning process in the health sector.

Another study by Ali et al. (2017) used the DEA and DEA-based Malmquist productivity index to estimate relative technical efficiency, scale efficiency, and total factor productivity index of hospitals in **Ethiopia** using six-year-round panel data. The study identified that efficiency across the facilities varies over time. Results from the Tobit model indicated that among other contractual and environmental factors, teaching hospitals were less efficient than other hospitals. This was because they treat severe cases that require a longer length of stay and thus require more resources which adversely affected the aggregate output level. The hospital that provides both health services and training is less efficient than other hospitals. Teaching alongside the provision of the health services may complicate and lose focus on the activities as they care for both the academics and health services provision.

Kirigia & Asbu (2013) on the other hand used an output-oriented BCC model to estimate the performance of the 20 public hospitals in **Eritrea** (Eastern Africa). The result identified that 42% of the hospitals were inefficient. The inefficient hospitals could have become more efficient by increasing output in terms of inpatient discharge and outpatient visits by 5.05% and 3.42% respectively. On the other hand, the hospitals could also save the access input resources and redistributed them to the lower-level facilities in need. On the second-stage analysis, the ratio of outpatient visits to inpatient days (OPDIPD) and the average length of inpatient stay (ALOS) are significantly correlated to hospital inefficiencies. The 1-unit increase in the OPDIPD could reduce the inefficiency of the hospitals by 1.33. On the other hand, an increase in ALOS could increase the inefficiencies as it was positively correlated with the inefficiency scores. Essentially it required policy interventions to utilize the access resources and reduce the ALS would reduce the inefficiencies and improve the performances.

Mujasi et al. (2016) also used an output-oriented BCC model to measure efficiencies of the 18 hospitals in **Uganda**. This study was similar to that of (Kirigia and Asbu 2013) meaning that generally, the hospitals have performed well. The majority of the hospitals have utilized the resources well despite the few inefficiencies. The average pure and scale efficiencies were almost 90%. However, those few inefficient hospitals could have become more efficient by increasing the outpatient department visits and inpatient days by 45,943 and inpatient days by 31,425 respectively. Alternatively, it would also become efficient by redistributing their extra input resources to the other level of facilities.

Again, the Tobit regression model indicated that OPDIPD and BOR were negatively correlated. OPDIPD and BOR are negatively correlated meaning will reduce the inefficiency of the hospital when they increase by 1 unit each. It further identified that the availability of more primary care facilities within the hospital's catchment area also increases the inefficiency level due to more patients are served at the lower level facilities at the same catchments area. The government needs to apply appropriate interventions to support inef-

efficient hospitals to improve their efficiencies. One could be to have policies and strategies to increase demand for health services to utilize the hospitals rather than input reductions.

Similar recommendations had been made to a study done by Kirigia et al. (2002) in **Kenya**. DEA has demonstrated that 26% of hospitals were inefficient, and they need to either reduce their inputs or increase their outputs to become efficient. Again, access to input resources could have been redistributed to other facilities in need.

Finally, Awara & Susan (2019) estimated the performance of the hospitals in **Nigeria**. The study compared hospitals based on the ownership and size of the hospitals. The results identified that private hospitals were more scale inefficient than public hospitals while medium-sized hospitals were more scale inefficient than small size hospitals. The average level of technical inefficiency was higher in private hospitals (10.6%) than in public hospitals (8.7%) for the two periods of the study. Based on the size, the level of inefficiency was higher for medium-sized hospitals (10.6%) than for small-sized hospitals (9.1%).

## PROBLEM STATEMENT

Necessary resources for the hospitals must be proportionally resourced to ensure fully operational at all times. Like any other developing nation in the world, today Papua New Guinea is faced with an increasing scarcity of resources for effective health care service delivery. The shortage of physicians and nurses is a critical constraint. The aggregate number of health workers in Papua New Guinea is considerably lower than the World Health Organization (WHO) minimum threshold density of 2.28 per 1,000 population to achieve the health-related Medium Development Goals (MDGs) (World Bank 2011).

In addition, Papua New Guinea health expenditure is estimated at 4.3% of gross domestic product (GDP). Within the health sector, hospitals consume the highest proportion of health resources at 31 percent of the health budget (National Department of Health 2012). However, there are few improvements in health indicators which implies that the available resources may not have been utilized efficiently. It has become the major constraint in pursuing the goal of improving the health status of the population (National Department of Health 2017).

Moreover, there is a considerable **knowledge gap** in the measurement of health facility performances, the current study draws to examine the overall technical efficiency of the twenty (20) public provincial hospitals in Papua New Guinea. The study will focus on outpatient visits and in-patient discharge as the key output indicators in terms of health service delivery from the hospitals. The *possible benefits* of the study might include an understanding of the performance of the hospitals. The utilization and applications of the findings or results may also be used as the blueprint for doing resource allocations, policy formulations, and make informed decisions in the resource distribution.

## STUDY OBJECTIVES

The main research question to ask is; What are the determinants affecting the technical efficiency, pure and scale efficiency of the public hospitals in Papua New Guinea? The specific objectives of the study include;

To measure the level of technical efficiency, pure and scale efficiency of the individual Hospitals using the Data Envelopment Analysis (DEA).

To estimate the magnitudes of output increases and/or input reductions that are required to make relatively inefficient hospitals more efficient and

To investigate the factors influencing hospital inefficiency using the Tobit regression model.

## **RESEARCH METHODS**

The study was divided into two (2) parts;

a)The first part of the study design measured the efficiency of the hospitals using the DEA model. The DEA VRS output-oriented model was applied to measure the efficiencies of the hospital.

b)Secondly, after getting the results from the DEA of the efficiency scores, the Tobit regression model was used to define the determinant (contextual factors) that have a significant impact on hospital efficiency. The results were used to explain the variation in efficiency levels across the hospitals.

### **Sources of Data**

The study used the secondary data from the National Health Information System (NHIS) for output variable data and the Facility Inventory System (FIS) for the input variable data for the 20 provincial hospitals. Data was collected for the year, 2017 and thus the observation is 20.

The NHIS and Facility level information are routine activities for the provincial health services and hospitals that report to the National Department of Health on an annual basis on hard copies. The department then enters them into the NHIS and Facility Inventory System. The accuracy of the data depends on the timely and how effective data are sent from the provinces and actual entry to the system at the national level.

### **Conceptual Framework**

Hospitals use multiple health inputs to produce various health service outputs through a production process. The inputs can be categorized as capital (number of beds, equipment, etc.) and health personals (medical doctors, nurses, etc.) to produce the outputs (outpatient visits and inpatient days/discharges) in the production. The health production process does not occur in a vacuum; it can be influenced by environmental and institutional factors (both internal and external) (Mujasi, Asbu et al. 2016). Therefore, it is important to have further detailed analysis to examine the efficiencies of the hospitals with those institutional and environmental factors. Hence, the study identified the hospital efficiency scores using the output-oriented DEA method followed by Tobit regression models.

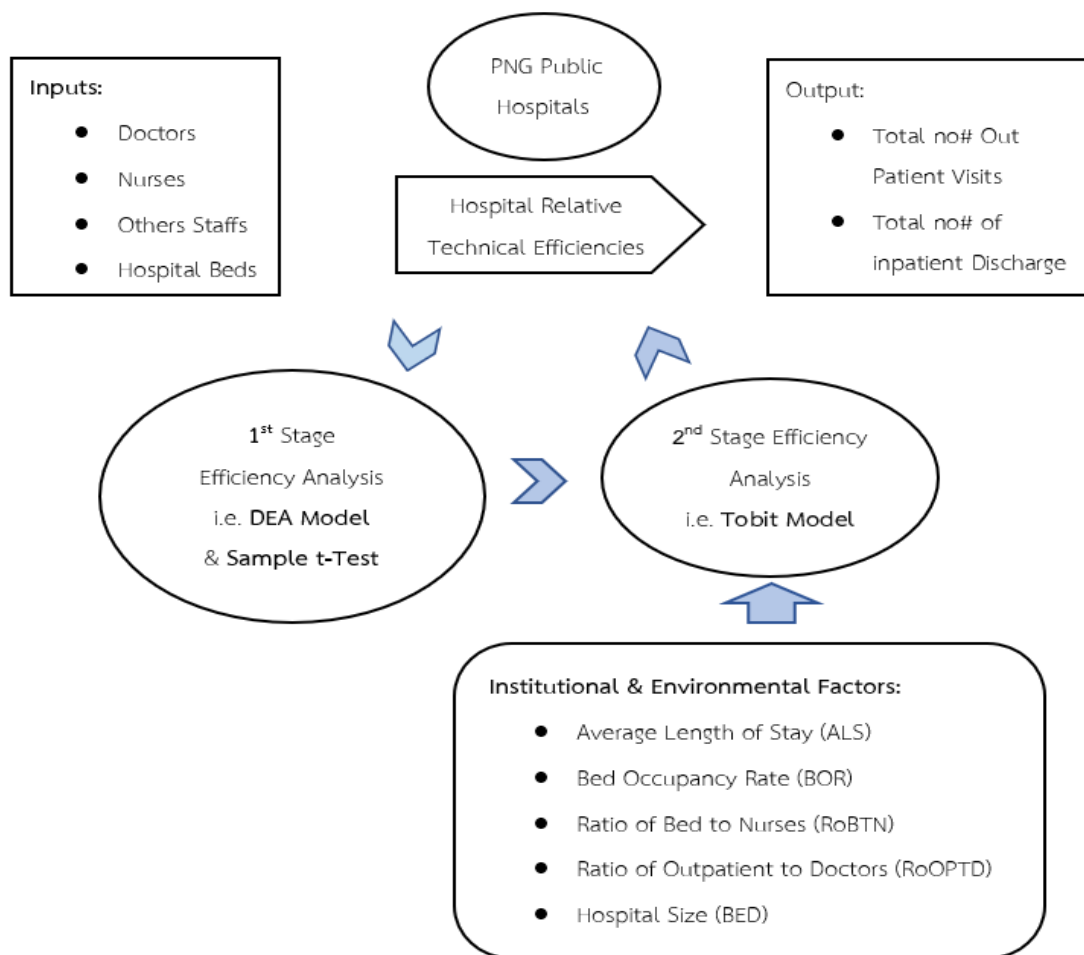
At the first stage of the analysis, an output-oriented BCC model was applied to estimate the technical efficiency scores for each of the hospitals. In the second stage, the economet-

ric analysis (Tobit regression) was applied. This could be in line with the studies made by (Mujasi, Asbu et al. 2016, Ali, Debela et al. 2017, Sultan and Crispim 2018, Ahmed, Hasan et al. 2019) to analyze and regress the efficiency scores against the institutional and environmental factors to estimate their impacts on efficiency. The literature indicated that some of the factors have a significant impact on hospital efficiency while others do not.

Hence, in the current study, relative efficiency scores from the results of the DEA in the first stage of the analysis could be further investigated using the Tobit regression model. The efficiency scores of the hospital were treated as dependent variables regressed against the contextual factors to estimate their impacts on the efficiencies of the hospitals.

The conceptual framework in figure 4.1 illustrates the first and the second stage of the analysis.

**FIGURE 4.1:** Conceptual Framework Diagram



### Selections of Input and Output Variables in the study

The selection of variables was based on the literature reviews conducted. The selections of inputs and outputs are driven and guided by past studies of hospitals that employ similar inputs and outputs for similar problem sets. Inputs in the hospital productions are classi-

fied as the number of beds, machines, infrastructure buildings, equipment, health personnel (both clinical and non-clinical, etc. The bed is the proxy commonly used in the studies as the capital because it is important and has a significant relationship with its corresponding output like inpatient days or discharges. Doctors and nurses are used as the proxy to the labor including other medical and support staff as inputs.

Total inpatient discharge and total outpatient visits were used as the output variables. All the hospital services are consolidated by disease program and reported as total inpatient discharge and total outpatient visits. The study used hospital data updated by the 2015 National Health Information System.

**TABLE 4.1.** Description of Input and output variables

| Nb | Input Variables     | Abbr. | Definitions or Descriptions                                                                                                     | Units  |
|----|---------------------|-------|---------------------------------------------------------------------------------------------------------------------------------|--------|
| 1  | Doctors             | MS    | Refers to total number of medical doctors in hospital who graduated from Schools of Medicine (physicians, dentists, residents). | Person |
| 2  | Nurses              | NO    | Total Number of nurses including professional, Community Health Workers (CHW) Health Extension Officers (HEOs).                 | Person |
| 3  | Other Staffs        | OS    | Total Number of support staffs (administrative assistants, other general staff, casuals and lab technicians)                    | Person |
| 4  | Beds                | BD    | beds that are regularly maintained and staffed for the accommodation and full-time care of a succession of inpatients           | Day    |
| NO | Output Variables    | Abbr. | Definition or Descriptions                                                                                                      | Units  |
| 1  | Outpatient visits   | OPD   | Total number of outpatient visits to the hospital (2017)                                                                        | Visit  |
| 2  | Inpatient Discharge | IPD   | Total number inpatients received inpatient services and discharged from the hospital beds in 2017                               | Disch  |

### **Determinants of Hospital Efficiency Using Regression Model**

The explanatory variables for a Tobit regression model were selected based on a review of the literature (Ali, Debela et al. 2017, Sultan and Crispim 2018, Ahmed, Hasan et al. 2019) on efficiency analysis as discussed below.

### **Dependent Variables**

In the second stage of DEA analysis, the Tobit regression model was used to investigate the contextual factors that have a significant impact on the relative efficiency of the hospitals from the initial analysis. Therefore, the inefficient scores under output-oriented DEA analysis will become the dependent variables that will regress against the other contextual factors as explanatory variables.

## Explanatory Variable

Factors that affect the efficiency of hospitals are classified as contextual factors i.e. average length of stay (ALS), bed occupancy ratio (BOR), the ratio of bed to nurses (RoBTN), the ratio of the outpatient visit to doctors (RoOPTD), and hospital size (BED).

The following table summarises the dependent and independent variables in the second analysis using the statistical method.

**TABLE 4.2.** Shows the summary of independent and dependent variables for Tobit regression analysis.

| Table 4.2                       |                              |                           |                                |                                       |                     |
|---------------------------------|------------------------------|---------------------------|--------------------------------|---------------------------------------|---------------------|
| Dependent Variables             | Independent Variables        |                           |                                |                                       |                     |
| Pure Technical Efficiency (PTE) | Average Length of Stay (ALS) | Bed Occupancy Ratio (BOR) | Ratio of Bed to Nurses (RoBTN) | Ratio of Outpatient Visits to Doctors | Hospital Size (BED) |

The average length of stay (ALS) – Average number of days patients spent in a hospital  
It is calculated as follows:

$$ALS = \frac{\text{inpatient days}}{\text{admission (discharges)}}$$

Bed occupancy ratio (**BOR**) – Utilization of the available bed capacity. It indicates the percentage of beds occupied by patients in a defined period, usually a year. It is calculated as follows (Demir, Pulford et al. 2017);

$$BOR = \frac{\text{inpatient days}}{\text{bed days}} \times 100$$

Where;

inpatient days = inpatient x ALS

Bed Days = number of beds x 365 days (no of days in a year)

The ratio of hospital beds to nurses (**RoBTN**) - Total number of beds per nurse attending to in the hospital (Total number of Beds/Total number of Nurses)

The ratio of outpatient to doctors (**RoOPTD**) - Total number of outpatient visits treated per medical doctors in the hospital (Outpatient/total number of medical doctors)

Size of the hospitals (**BED**) – sizes are classified by the number of beds they have although there can be some variation within these groups of hospitals and medical centers.

## Data Envelopment Analysis (DEA)

Data Envelopment Analysis (DEA) is extensively used for estimating the efficient frontier. The benefit of using DEA is that it can deal with Decision-Making Unit (DMU) that employs multiple inputs to produce multiple outputs. The DEA approach assumes that a set of DMUs is associated with their corresponding amount of inputs and outputs. The efficiency score of the DMU is defined as a ratio of the weighted sum of the outputs to the weighted sum of the inputs (Ahmed, Hasan et al. 2019). A DMU's efficiency score is calculated relative to an efficiency frontier. DMUs located on the efficiency frontier have an efficiency score of 1 (or 100%). And those DMUs operating beneath the frontier have an efficiency score inferior to 1 (or 100%) and hence can improve future performance.

In estimating the efficient frontier, Charnes, Cooper, and Rhodes (CCR) (1978) assumed production as constant returns to scale (CRS) which means any level of increase in inputs will proportionally increase the level of output.

Following Charnes, Cooper, and Rhodes (CCR) the technical efficiency of a hospital can be expressed as a maximum ratio of the total sum of weighted outputs to the total sum of weighted inputs as represented by equation 1. That is;

$$Efficiency = \frac{\text{weighted sum of hospital output}}{\text{weighted sum of hospital input}} \quad (1)$$

Assuming that there are  $n$  hospitals, each with  $m$  hospital inputs and  $s$  hospital outputs, the relative efficiency score of a given hospital ( $TE_0$ ) is obtained by solving the following output-orientated CCR model.

To maximize the efficiency of the objective function as the best practice DMU on the frontier as represented by equation (2) is subject to the constraints of the rest of the DMUs is less than or almost equal to 1 is represented below;

Where:

$$\max TE_0(u, v) = \left( \frac{\sum_{r=1}^s \mu_r y_{r0}}{\sum_{i=1}^m v_i x_{i0}} \right) \quad (2)$$

$$\begin{aligned} \text{Subject to : } & \left( \frac{\sum_{r=1}^s \mu_r y_{rj}}{\sum_{i=1}^m v_i x_{ij}} \right) \leq 1; j = 1, 2, \dots, n \\ & u_i \geq 0; i = 1, 2, \dots, m; \\ & v_r \geq 0; r = 1, 2, \dots, s; \end{aligned}$$

$TE_0$  = the efficiency score of hospital 0;

$Z_{ij}$  = the amount of health system input  $i$  utilized by the  $j^{th}$  hospital;

$y_{rj}$  = the amount of health system output  $r$  produced by the  $j^{th}$  hospital;

$u_i$  = weight given to health system input  $i$ ;

$v_r$  = weight given to output  $r$

If the denominator  $(\sum_{i=1}^m u_i x_{i0} = 1)$  for equation (2) of the hospital is equal to one, the trans

$$\begin{aligned}
 \max TE_0 &= \sum_{r=1}^s v_r y_{r0} \\
 \text{subject to : } &\sum_{r=1}^s v_r y_{rj} - \sum_{i=1}^m u_i x_{ij} \leq 0; j = 1, 2, \dots, n \\
 &\sum_{i=1}^m u_i x_{i0} = 1 \\
 &u_i \geq 0; i = 1, 2, \dots, m \\
 &v_r \geq 0; r = 1, 2, \dots, s
 \end{aligned} \tag{3}$$

formed linear programming model for hospital 0 can be written as follows;

In reality, the health service production process is not linear. That means CRS may not be feasible due to the presence of imperfect competition, government regulations, budget constraints, etc. that force hospitals to deviate from the efficient scale size. That was the main reason why the initial (CCR) model was modified by Banker, Charnes, and Cooper (BCC) (1984) based on the VRS which means any level of increase in inputs will not proportionally increase the level of output to account for the presence of pure and scale efficiencies which caused the inefficiencies of the hospitals (Ali, Debela et al. 2017).

There are three (3) scenarios that exist when the hospital utilizes the inputs into outputs productions. These include CRS where output increase proportional to the input increase, increasing return to scale (IRS) where output increase more than input increase, and decreasing return to scale (DRS) where output increase less than the input increases depending on whether the hospital is experiencing economies of scale or diseconomies of scale (Kirigia and Asbu 2013).

Hence, the VRS model isolates the pure technical efficiency component and scale efficiency which is related to the size or structure of the decision-making unit (DMU). Some-



times the inefficiencies are caused by the size of the hospitals. The hospital may be too large for the volume of activities that it is conducting; and therefore, may experience *inefficiencies of scale*. Conversely, a hospital may be too small for its level of operation, and thus experience *efficiencies of scale*. Inefficiency is due to too many inputs (workforce, capitals, etc.) leading to decreased output or what is commonly known as inefficiencies of scale which to some extent are realistic assumptions for a developing country like PNG (Akazili, Adjuik et al. 2008).

The output-oriented BCC model is specified as follows:

$$\begin{aligned}
 \max TE_0(\mu, v) &= \sum_{r=1}^s \mu_r y_{ro} + u_0 \quad . \\
 \text{Subject to :} \\
 \sum_{i=1}^m v_i x_{ij} &= 1 \\
 \sum_{r=1}^s \mu_r y_{ro} - \sum_{i=1}^m v_i x_{ij} + u_0 &\leq 0, j = 1, 2, \dots, n \\
 \mu_r &\geq \varepsilon, r = 1, 2, \dots, s \\
 v_i &\geq \varepsilon, i = 1, 2, \dots, m \\
 u_0 &\text{ is unconstrained in sign.}
 \end{aligned} \tag{4}$$

Where:

$\varepsilon$  = is an infinitesimal non-Archimedean quantity greater than zero.

A value of  $u_0 > 0$  implies increasing returns to scale;

$u_0 < 0$  means decreasing returns to scale, and

$u_0 = 0$  denotes constant returns to scale.

Under the DEA BCC model, it is possible to analyze whether a hospital's production indicates an IRS, CRS, or DRS by the sign of the variable  $u_0$  (equation 4) above. A value of  $u_0 > 0$  implies IRS;  $u_0 < 0$  means DRS, and  $u_0 = 0$  denotes CRS. Therefore, this BCC model permits both the separation of technical and scale efficiencies and the determination of whether an individual hospital's operations were in regions of IRS, CRS, or DRS.

To identify the relative technical efficiency scores of all the hospitals in the sample, the equation (4) above will be run 20 times because we have a sample size of 20 hospitals. DEA by default assigns weights to each hospital's inputs and to maximize the efficiency scores of the hospitals. A hospital is considered to be technically efficient if it scores one, implying 100% relative technical efficient, whereas a score of less than 1 implies that it is relatively technically inefficient, compared to the peers in its efficiency reference set.

The study utilized an output-oriented DEA BCC model as it focuses on the maximization of the output at the given level of the inputs. This model is more applicable in PNG because almost the entire health system is (personnel, beds, equipment & infrastructure, etc.) funded by the government through the normal budgetary system.

### **Tobit Regression Model**

In this study, due to data limitations, the possible independent contextual factors as continuous variables are; BOR (bed occupancy rate), ALS (average length of stay), RoBTN (ratio of bed to nurses), RoOPTD (ratio of outpatient visits to doctors) and number of BEDs to indicate the hospital size as a dummy (the qualitative variable) which will be regressed against the technical inefficiency scores to examine how these factors may affect the inefficiency of the hospitals.

The censored Tobit model was used since the dependent variable is censored from zero (0). Similar to the studies of (Kirigia and Asbu 2013, Ali, Debela et al. 2017), this study also uses the DEA scores that transformed into inefficiency scores using the following formula:

$$\text{Inefficiency Scores} = \left( \frac{1}{\text{DEA TE Score}} \right) - 1$$

The Tobit regression model is applicable in cases where the dependent variable is constrained in some ways, in this case, its constraints to lie above 0. The censored Tobit regression model could be determined as follows:

Where

**N** - is the number of observations

$\varepsilon_t \sim N(0, \sigma^2)$  – meaning error term is normally distributed with 0 mean and same variance

$Y_i^*$  - unobserved latent variable and  $y_i$  stand for transformed DEA VRS efficiency scores for hospital  $i$ .

$\beta_i$  - is the vector of unknown parameters which determines the relationship between the independent variables and the latent variable with relevant sign

$x_i$  - set of explanatory/independent variables for hospital  $i$

$\varepsilon_t$  - an independently distributed stochastic/random error term assumed to be normally distributed with zero mean and same variance  $\sigma^2$

According to (Awara & Susan, 2019) once the DEA scores are changed into inefficiency scores, the Tobit model coefficients can be interpreted similarly as that of ordinary least squares regression. So, the initial regression model containing these inefficiency scores as the dependent variable with the contextual factors will be generated as follows:

$$\text{Ineff} = \alpha + \beta_1 \text{ALS} + \beta_2 \text{BOR} + \beta_3 \text{RoBTN} + \beta_4 \text{RoOPTD} + \beta_5 \text{BED} + \varepsilon_i$$

Where;

Ineff: Inefficiency scores for the hospitals

B<sub>0</sub>: is the constant term

β<sub>1</sub>: Coefficient of ALS (average length of stay)

β<sub>2</sub>: Coefficient BOR (bed occupancy rate)

β<sub>3</sub>: Coefficient of RoBTN (ratio of bed to nurses)

β<sub>4</sub>: Coefficient of RoOPTD (ratio of outpatient visits to doctors)

B<sub>5</sub>: Coefficient of BED (Size) dummy indicating 1= big size (beds > 247.2) and 0 = small size (BED ≤ 247.2).

ε *i*: is the stochastic/random error term.

### Hypothesis

By estimating the empirical model, we wished to test two hypotheses:

Firstly, to test the overall significance of the model, we state the joint null hypothesis to find out is there any significance or what's the use of keeping them in the model;

$$\mathbf{H_0: } \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$$

and an alternative or research hypothesis is;

**H<sub>A</sub>:** at least a parameter is not equal to zero.

The **H<sub>0</sub>** is directed towards insignificance. If it is unable to reject the **H<sub>0</sub>**, meaning we don't have sufficient evidence to support the **H<sub>0</sub>** then will reject **H<sub>0</sub>** and accept the **H<sub>A</sub>**.

The final selected empirical model based on the Chi-Square method is:

$$\mathbf{Ineff} = \alpha + \beta_1 ALS + \beta_2 BOR + \beta_3 RoBTN + \beta_4 RoOPTD + \beta_5 BED + \varepsilon i$$

Secondly, **β<sub>n</sub>** is not significantly different from zero in either direction. Thus, the null (**H<sub>0</sub>**) and alternative hypotheses (**H<sub>A</sub>**) are **H<sub>0</sub>: β<sub>n</sub> = 0**; and **H<sub>A</sub>: β<sub>n</sub> ≠ 0**. The alternative hypothesis not equal to 0 (**H<sub>A</sub>: β<sub>n</sub> ≠ 0**) means that it could be greater or less than 0 depending on their relationships with the dependent variables (**Ineff**).

The individual null hypotheses are tested using the t-distribution test. So the hypothesis can be identified firstly by looking at whether contextual factors have any relationships with the inefficiency scores. The study expected that ALS and RoBTN have positive relationships with inefficiency scores while the rest of the factors BOR, RoOPTD, and BED have negative relationships with inefficiency scores.

Therefore, the individual hypotheses are given below;

$$\mathbf{H_0: } \beta_1 = 0$$

**H<sub>A</sub>: β<sub>1</sub> > 0** Coefficient of ALS is positive meaning **β<sub>1</sub> > 0 in H<sub>A</sub>**.

$$\mathbf{H_0: } \beta_2 = 0$$

**H<sub>A</sub>:  $\beta_2 < 0$**  Coefficient of BOR is negative meaning  $\beta_2 < 0$  in **H<sub>A</sub>**.

**H<sub>0</sub>:  $\beta_3 = 0$**

**H<sub>A</sub>:  $\beta_3 > 0$**  Coefficient of RoBTN is positive meaning  $\beta_3 > 0$  in **H<sub>A</sub>**

**H<sub>0</sub>:  $\beta_4 = 0$**

**H<sub>A</sub>:  $\beta_4 < 0$**  Coefficient of RoOPTD is negative meaning  $\beta_4 < 0$  in **H<sub>A</sub>**

**H<sub>0</sub>:  $\beta_5 = 0$**

**H<sub>A</sub>:  $\beta_5 < 0$**  Coefficient of BED is negative meaning  $\beta_5 < 0$  in **H<sub>A</sub>**

So, the final empirical model should be:

$$Ineff = \alpha + \beta_1 ALS - \beta_2 BOR + \beta_3 RoBTN - \beta_4 RoOPTD - \beta_5 BED + \varepsilon_i$$

To estimate the regression coefficients ( $\beta_i$ ), we applied the maximum likelihood estimation (MLE) method in Tobit regression. Regression coefficients are interpreted similarly to that of OLS regression. However, the only difference is the interpretation of the coefficient. The negative sign means better efficiency and the positive sign means more inefficiency (Sultan and Crispim 2018).

$$\begin{aligned} y^* &= \beta_i x_i + \varepsilon_i \\ y_i &= y_i^* \quad \text{if } y_i^* > 0 \\ y_i &= 0 \quad \text{if } y_i^* \leq 0 \\ i &= 1, 2, \dots, N \end{aligned}$$

## RESULTS AND DISCUSSIONS

Table 5.1 shows the descriptive statistic of the inputs and output variables used in the analysis.

**TABLE 5.1.** Descriptive statistics of inputs and output variables

|                    | Output Variables    |                  | Input Variables |                |               |                     |
|--------------------|---------------------|------------------|-----------------|----------------|---------------|---------------------|
|                    | <i>IP Discharge</i> | <i>OP Visits</i> | <i>Beds</i>     | <i>Doctors</i> | <i>Nurses</i> | <i>Other Staffs</i> |
| Mean               | 5,531               | 38,846           | 247             | 19             | 167           | 98                  |
| Standard Deviation | 4,991               | 18,350           | 241             | 13             | 108           | 160                 |
| Minimum            | 113                 | 3,773            | 19              | 2              | 37            | 15                  |
| Maximum            | 19,613              | 71,318           | 1,096           | 50             | 442           | 757                 |
| Sum                | 110,610             | 776,917          | 4,944           | 371            | 3,331         | 1,965               |
| Observations       | 20                  | 20               | 20              | 20             | 20            | 20                  |

The hospitals have a total of 110,610 inpatient discharges and 776,917 outpatient visits. These outputs have been produced using the inputs (4,944 beds, 371 doctors, 3,331 nurses, and 1,965 Other Staffs). There was wide variation in both inpatient discharge and outpatient visits across the hospitals. The inpatient discharges ranged from 113 received by Laloki Hospital to 19,613 as the highest number of patients received by Port Moresby General Hospital. The average inpatient was around 5,531 with a standard deviation of 4,991.

Correspondingly, outpatient department visits varied from a minimum of 3,773 produced by Kerema Hospital to a maximum of 71,318 from Kimbe Hospital. The average outpatient visit was around 38,846 with a standard deviation of 18,350

Similarly, there was a significant variation among the number of input variables. The minimum number of hospital beds ranging from 19 (Daru Hospital) to 1,096 (Port Moresby General Hospital) with an average value of 247 and a standard deviation of 241. Kerema Hospital has the lowest number of doctors with only 2 while Angau Hospital has the highest with 50 and an average value of 19 and a standard deviation of 13.

Nurses range from 37 with Popodetta Hospital to 442 nurses with Port Moresby General Hospital with an average value of 167 and a standard deviation of 108.

And finally, Laloki has the lowest number of Other Staffs (15) while Port Moresby still maintained the highest with 757 other staff.

Table 5.3 shows the individual hospital DEA scores for CRSTE, VRSTE scale efficiency (SE), and returns to scale (RTS). The table also shows the efficiency reference set for each inefficient hospital. The end of the table shows the overall descriptive statistics (mean, standard deviation, minimum, maximum, etc.) of the CRSTE, VRSTE, and SE scores.

### Technical Efficiency

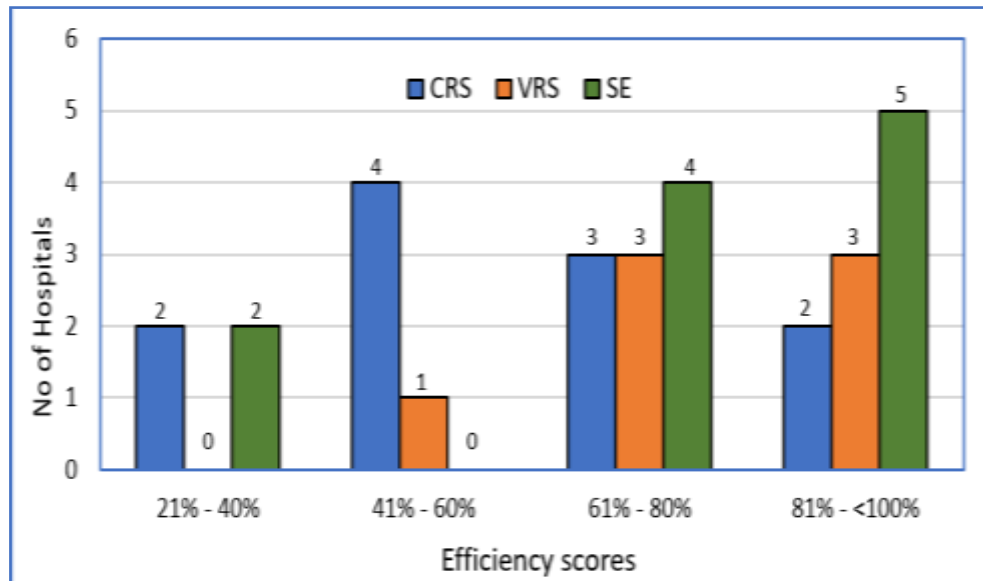
According to the results of the study (refer to table 5.3), 9 (45%) of the 20 hospitals were technically efficient, implying that they were efficient (both pure technical and scale efficiency). A percentage change in inputs is accompanied by the same percentage change in outputs. The remaining 11 (55%) are relatively inefficient, having technical efficiency scores less than 100%. The CRSTE score results showed a wide variation between efficient and inefficient hospitals, with a minimum of 24% to a maximum of 100%. The mean overall technical efficiency score is 0.79 (79%) with a standard deviation of 0.25 (25%)

Figure 5.2 shows the distribution of the CRSTE, VRSTE, and SE scores of the inefficient hospitals. The distribution of CRSTE was done as follows; 2 hospitals had technical efficiency scores between 21% - 40%, 4 hospitals had technical efficiency scores between 41% - 60%, 3 hospitals had technical efficiency scores between 61% - 80%, and 2 hospitals had technical efficiency scores between 81% - <100%. Out of the inefficient hospitals, Kerema and Laloki have the lowest technical efficiency scores of 0.24 (24%) and 0.38 (38%) respectively. Both fall in the efficiency distribution between 21% - 40%. The average CRSTE score of the inefficient hospitals was 0.61 (61%) with a standard deviation of 0.2 (20%). This means that the inefficient hospitals could improve their outputs by (100-61) 39%. In other words, inefficient hospitals should have augmented all the outputs by 39% to be efficient.

**TABLE 5.3.** Output Oriented DEA CRS, VRS, and SE scores

| DMUs(Hospitals)                                                                                                                                                            | Efficiency Scores |               |               | RTS | Reference Set (Limbda Weights)                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|---------------|-----|------------------------------------------------------------------------|
|                                                                                                                                                                            | CRS               | VRS           | SE            |     |                                                                        |
| ALOTAU HOSPITAL                                                                                                                                                            | 0.486             | 0.744         | 0.654         | drs | Kiribe (0.415), Vanimo (0.398), Mt Hagen (0.188)                       |
| ANGAUBASE HOSPITAL                                                                                                                                                         | 0.729             | 1             | 0.729         | drs |                                                                        |
| BORAM HOSPITAL                                                                                                                                                             | 0.743             | 0.928         | 0.801         | drs | Kiribe (0.045), Angau (0.284), Goroka Base (0.061), Popondetta (0.610) |
| BUKA HOSPITAL                                                                                                                                                              | 1                 | 1             | 1             | -   |                                                                        |
| DARU HOSPITAL                                                                                                                                                              | 1                 | 1             | 1             | -   |                                                                        |
| GOROKA BASE HOSPITAL                                                                                                                                                       | 1                 | 1             | 1             | -   |                                                                        |
| KAVIENG HOSPITAL                                                                                                                                                           | 0.572             | 0.602         | 0.949         | drs | Popondetta (0.704), Kiribe (0.090), Lorengau (0.206)                   |
| KEREMA HOSPITAL                                                                                                                                                            | 0.238             | 1             | 0.238         | irs |                                                                        |
| KIMBE HOSPITAL                                                                                                                                                             | 1                 | 1             | 1             | -   |                                                                        |
| KUNDIAWA HOSPITAL                                                                                                                                                          | 0.583             | 0.854         | 0.682         | drs | Mt Hagen (0.365), Kiribe (0.406), Vanimo (0.229)                       |
| LALOK HOSPITAL                                                                                                                                                             | 0.382             | 1             | 0.382         | irs |                                                                        |
| LORENGAU HOSPITAL                                                                                                                                                          | 1                 | 1             | 1             | -   |                                                                        |
| MADANG HOSPITAL                                                                                                                                                            | 0.849             | 0.858         | 0.990         | drs | Goroka Base (0.464), Kiribe (0.461), Lorengau (0.075)                  |
| MENDI HOSPITAL                                                                                                                                                             | 0.568             | 0.689         | 0.824         | drs | Angau Base (0.084), Kiribe (0.040), Popondetta (0.876)                 |
| MOUNT HAGEN HOSPITAL                                                                                                                                                       | 1                 | 1             | 1             | -   |                                                                        |
| NONGABASE HOSPITAL                                                                                                                                                         | 0.941             | 1             | 0.941         | drs |                                                                        |
| POPONDETTA HOSPITAL                                                                                                                                                        | 1                 | 1             | 1             | -   |                                                                        |
| PORT MORESBY GENERAL                                                                                                                                                       | 1                 | 1             | 1             | -   |                                                                        |
| VANIMO HOSPITAL                                                                                                                                                            | 1                 | 1             | 1             | -   |                                                                        |
| WABAG HOSPITAL                                                                                                                                                             | 0.612             | 0.670         | 0.913         | drs | Goroka Base (0.074), Vanimo (0.721), Buika (0.205)                     |
| <b>Mean</b>                                                                                                                                                                | <b>0.785</b>      | <b>0.9173</b> | <b>0.8552</b> |     |                                                                        |
| <b>Standard Deviation</b>                                                                                                                                                  | <b>0.247</b>      | <b>0.1336</b> | <b>0.2202</b> |     |                                                                        |
| <b>Minimum</b>                                                                                                                                                             | <b>0.238</b>      | <b>0.602</b>  | <b>0.238</b>  |     |                                                                        |
| <b>Maximum</b>                                                                                                                                                             | <b>1</b>          | <b>1</b>      | <b>1</b>      |     |                                                                        |
| <b>Observation</b>                                                                                                                                                         | <b>20</b>         | <b>20</b>     | <b>20</b>     |     |                                                                        |
| CRS- Constant Return to Scale, VRS- Variable Return to Scale, SE- Scale Efficiency, RTS- Return to Scale, drs- decreasing return to scale, irs- increasing return to scale |                   |               |               |     |                                                                        |

**FIGURE 5.2:** Distribution of CRSTE, PTE & SE of the inefficient hospitals



### Pure Technical Efficiency

Under VRS approach (refer to table 5.3), out of 20 hospitals, 13 (65%) hospitals were technically efficient, scoring 100%, and the remaining 7 (35%) hospitals were VRS technically inefficient scoring less than 100%. The VRS technical efficiency scores had the gap between efficient and inefficient hospitals with a minimum score of 0.60 (60%) to a maximum of 1 (100%). The average score of the overall VRSTE was 0.92 (92%), with a standard deviation of 0.13 (13%). That means the mean score under the VRS approach was better than that of the CRS approach. The hospitals had performed well under the VRS approach.

The distribution of VRSTE scores of the 7 inefficient hospitals was done as follows (refer to fig.5.2); among the inefficient hospitals, 1 hospital had a technical efficiency score between 41% - 60%, 3 hospitals had technical efficiency scores between 61% - 80% and 3 hospitals had technical efficiency scores between 81% - <100%. The inefficient hospitals had an average technical efficient score of 0.76 (76%) and a standard deviation of 0.12 (12%). This implied that on average, they could have augmented their output by (100-76) 24% at the given level of inputs used to be efficient.

Surprisingly, (refer to table 5.3) 4 hospitals were inefficient under the CRS assumption but were efficient under the VRS assumption. The gap observed between the CRS and the VRS frontiers of these 4 hospitals was due to a problem of scales. Among these 4 hospitals, Kerema and Loloki had the highest level of scales). However, those other inefficient hospitals that were not either on the CRS and VRS frontier had not only scale problems but also due to poor management of the hospitals. They could eliminate the inefficiency attributable to poor management and scale to be efficient.

### Scale Efficiency



Under scale efficiency assumptions (refer to fig 5.2), 9 (45%) were scale efficient while 11 (55%) were scale inefficient. The distribution of scale efficiency scores of the 11 inefficient hospitals was presented as follows; 2 hospitals had scale efficiency scores between 21% - 40%; 4 hospitals had scale efficiency scores between (61%-80%) and the remaining 5 hospitals had scale efficiency score between 81% -<100%. The average scale efficiency score of the inefficient hospitals was 0.74 (74%) with a standard deviation of 0.24 (24%). This implied that on average, the scale inefficient hospitals could adjust their size to maximize their output by (100-74) 26%. Kerema, Laloki, Angau, and Nonga Hospitals with the constant return to scale technically inefficient could be fully attributed to scale efficiencies.

Interestingly, the study identified that 9 (45%) hospitals were efficient in both CRS and VRS which implied that if they increase the inputs, their output in terms of inpatient discharge and outpatient visits would increase in the same proportion. That means the CRSTE hospitals were operating at their most productive scale sizes.

Furthermore, four hospitals were inefficient under the CRS assumption but were efficient under the VRS assumption. This implied that their inefficiencies had resulted from the existence of the scale problem. At the same time, the rest of the inefficient hospitals in both assumptions (CRS and VRS) resulted from both scale and poor management of the hospitals.

The analysis further identified that (refer to table 5.3) 2 inefficient hospitals (Kerema and Laloki) exhibited an IRS. This implied that these two hospitals had not yet reached their optimal sizes. Their output in terms of inpatient discharge and outpatient visits would increase by a greater proportion compared to any increase in health service inputs. They need to increase their sizes and that has to be done practically by internal growth.

On the other hand, the remaining nine (9) inefficient hospitals were operating under DRS. This implied that their output in terms of inpatient discharges and outpatient visits would increase by a smaller proportion compared to an increase in health services inputs. These hospitals need to reduce their sizes to achieve an optimal scale.

After analyzing the efficiencies of the hospitals using each of the models, it was identified that the efficiency results were different in CRS or a VRS model. However, within each model, the frontier would not be affected by an input or an output orientation. In other words, the firms that were efficient in an input-oriented model were also efficient in output orientation. It was also identified that efficiency values under CRS model were the same in both (input or output) orientations. But there was a slight difference in values when the VRS model was assumed.

### **Scope for output increase/input reduction to improve the efficiency**

DEA calculates the efficiency score of a hospital of interest (target hospital) by comparing it with its efficient reference set. The efficiency reference set represents the outputs and corresponding weights of the efficient reference set hospitals which yields a hypothetical hospital (composite hospital) that produces output as much or more than the hospital of interest but also use fewer inputs. The weighted quantity of outputs and inputs are derived by multiplying the DEA-generated weights of its reference set hospitals with its corre-

sponding actual quantities of output and inputs of the reference set hospitals. The difference between the inputs and outputs of the composite hospital and the targeted hospitals provides the input or output required to make the target hospital efficient. For example, table 5.6 shows the reference set hospitals for the inefficient hospital (hospital of interest). DEA revealed Kavieng Hospital to be relatively inefficient, scoring 0.602 in terms of pure technical efficiency. Kavieng Hospital's inefficiency was identified and measured by comparing it with its efficiency reference set hospitals. The reference set hospitals for Kavieng are Kimbe, Lorengau, and Popodetta. It also shows the weighted quantity of inputs and outputs of the composite hospital.

As shown in Table 5.6, the weights of the reference set hospitals were as follows; 0.704 (Popondetta), 0.090 (Kimbe), and 0.206 (Lorengau). The weights were then multiplied with their corresponding actual quantity of output and inputs for each of the reference set hospitals to get a weighted quantity of inputs and outputs for the composite hospital. The composite hospital's targeted (projected) outputs and inputs were attained by summing the weighted output and inputs calculated from each of the reference set hospitals respectively. So, the projected inputs and outputs of the composite hospital was given as (inpatient discharge = 3,559, output visits = 47, 096) and (beds = 126, doctors = 10, Nurse = 51, other workers = 36). The projected outputs and inputs of the composite hospital were then compared against the actual quantities of inputs and outputs of the targeted inefficient hospital (Kavieng). The difference between the projected output and inputs of the composite hospital and the actual quantity of outputs and inputs of Kavieng Hospital were the output increase and the input reductions that were required for the inefficient hospital (Kavieng) to be efficient.

Hence the Kavieng Hospital can increase the inpatient discharge and outpatient visits by 91% (1,699.89) and 66% (18,722.56) respectively to be more efficient. Alternatively, Kavieng Hospital can also reduce doctors and nurses by (8) 47% and (48) 49% respectively to be efficient while maintaining its current level of beds and other staff.

**TABLE 5.6.** Comparison of Kavieng Hospital with its efficiency reference set hospitals.

| Efficiency Reference Set Hospital                                                                     | OUTPUT                              |                                       | INPUT                             |                                 |                                   |                                  |
|-------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|
|                                                                                                       | IPDischarge                         | OPVisits                              | Beds                              | Doctors                         | Nurses                            | Other Staffs                     |
| KIMBE HOSPITAL [A]                                                                                    | $5274^a \times 0.09^w$<br>= 474.66  | $71318^a \times 0.09^w$<br>= 6418.62  | $271^a \times 0.09^w$<br>= 24.39  | $10^a \times 0.09^w$<br>= 0.9   | $139^a \times 0.09^w$<br>= 12.51  | $38^a \times 0.09^w$<br>= 3.42   |
| LORENGAU HOSPITAL [B]                                                                                 | $2071^a \times 0.206^w$<br>= 426.63 | $37253^a \times 0.206^w$<br>= 7674.12 | $107^a \times 0.206^w$<br>= 22.04 | $8^a \times 0.206^w$<br>= 1.65  | $59^a \times 0.206^w$<br>= 12.154 | $18^a \times 0.206^w$<br>= 3.71  |
| POPONDETTA HOSPITAL [C]                                                                               | $3775^a \times 0.704^w$<br>= 2657.6 | $46879^a \times 0.704^w$<br>= 33028.2 | $113^a \times 0.704^w$<br>= 79.55 | $10^a \times 0.704^w$<br>= 7.04 | $37^a \times 0.704^w$<br>= 26.048 | $41^a \times 0.704^w$<br>= 28.87 |
| COMPOSITE HOSPITAL [D=A+B+C]                                                                          | 3558.89                             | 47095.56                              | 125.98                            | 9.59                            | 50.712                            | 35.99                            |
| KAVIENG HOSPITAL [E]                                                                                  | 1859                                | 28373                                 | 126                               | 18                              | 99                                | 36                               |
| Output Increase/Input Reduction [F=D-E]                                                               | 1699.89                             | 18722.56                              | -0.016                            | -8.41                           | -48.29                            | -0.008                           |
| %Change [G=(F/E)*100]                                                                                 | 91%                                 | 66%                                   | 0%                                | -47%                            | -49%                              | 0%                               |
| Note: superscript 'a' = Actual output and input quantities; superscript 'w' = Lambda weights from DEA |                                     |                                       |                                   |                                 |                                   |                                  |

Table 5.7 shows the input reductions and/or output increases that are required to make the seven (7) variable returns to scale technically inefficient hospitals to become more efficient.

**TABLE 5.7** Input reductions and /or Output increases for the inefficient hospitals.

| NO | Hospital          | Tech Eff | Input/Output     | Actual Qty | Target Qty | Difference | %       |
|----|-------------------|----------|------------------|------------|------------|------------|---------|
| 1  | ALOTAU HOSPITAL   | 0.744    | Beds (I)         | 202        | 202.00     | 0          | 0%      |
|    |                   |          | Doctors (I)      | 23         | 11.76      | -11.24     | -48.89% |
|    |                   |          | Nurses (I)       | 231        | 177.59     | -53.41     | -23.12% |
|    |                   |          | Other Staffs (I) | 144        | 77.64      | -66.36     | -46.08% |
|    |                   |          | IP Discharge (O) | 3,826      | 5,142.94   | 1,316.94   | 34.42%  |
|    |                   |          | OP Visits (O)    | 49,016     | 65,887.70  | 16,871.70  | 34.42%  |
| 2  | BORAM HOSPITAL    | 0.928    | Beds (I)         | 291        | 258.78     | -32.22     | -11.07% |
|    |                   |          | Doctors (I)      | 23         | 23         | 0          | 0%      |
|    |                   |          | Nurses (I)       | 121        | 121        | 0          | 0%      |
|    |                   |          | Other Staffs (I) | 62         | 49.47      | -12.53     | -20.21% |
|    |                   |          | IP Discharge (O) | 6,440      | 6,942.82   | 502.82     | 7.81%   |
|    |                   |          | OP Visits (O)    | 42,332     | 45,637.17  | 3,305.17   | 7.81%   |
| 3  | KAVIENG HOSPITAL  | 0.602    | Beds (I)         | 126        | 126        | 0          | 0%      |
|    |                   |          | Doctors (I)      | 18         | 9.59       | -8.41      | -46.73% |
|    |                   |          | Nurses (I)       | 99         | 50.71      | -48.29     | -48.77% |
|    |                   |          | Other Staffs (I) | 36         | 36         | 0          | 0%      |
|    |                   |          | IP Discharge (O) | 1,859      | 3,559.63   | 1,700.63   | 91.48%  |
|    |                   |          | OP Visits (O)    | 28,373     | 47,101.15  | 18,728.15  | 66.01%  |
| 4  | KUNDIAWA HOSPITAL | 0.854    | Beds (I)         | 232        | 232        | 0          | 0%      |
|    |                   |          | Doctors (I)      | 38         | 11.78      | -26.22     | -68.99% |
|    |                   |          | Nurses (I)       | 226        | 220.56     | -5.44      | -2.41%  |
|    |                   |          | Other Staffs (I) | 130        | 72.66      | -57.34     | -44.11% |
|    |                   |          | IP Discharge (O) | 5,466      | 6,397.69   | 931.69     | 17.05%  |
|    |                   |          | OP Visits (O)    | 52,606     | 61,572.79  | 8,966.79   | 17.05%  |
| 5  | MADANG HOSPITAL   | 0.858    | Beds (I)         | 294        | 274.98     | -19.02     | -6.47%  |
|    |                   |          | Doctors (I)      | 24         | 22.39      | -1.61      | -6.70%  |
|    |                   |          | Nurses (I)       | 213        | 179.92     | -33.08     | -15.53% |
|    |                   |          | Other Staffs (I) | 30         | 30.00      | 0          | 0%      |
|    |                   |          | IP Discharge (O) | 7,519      | 8,766.06   | 1,247.06   | 16.59%  |
|    |                   |          | OP Visits (O)    | 37,443     | 43,653.11  | 6,210.11   | 16.59%  |
| 6  | MENDI HOSPITAL    | 0.689    | Beds (I)         | 425        | 157.05     | -267.95    | -63.05% |
|    |                   |          | Doctors (I)      | 14         | 13.38      | -0.62      | -4.44%  |
|    |                   |          | Nurses (I)       | 61         | 61.00      | 0          | 0%      |
|    |                   |          | Other Staffs (I) | 85         | 43.75      | -41.25     | -48.53% |
|    |                   |          | IP Discharge (O) | 3,159      | 4,583.94   | 1,424.94   | 45.11%  |
|    |                   |          | OP Visits (O)    | 32,868     | 47,693.87  | 14,825.87  | 45.11%  |
| 7  | WABAG HOPITAL     | 0.67     | Beds (I)         | 109        | 109        | 0          | 0%      |
|    |                   |          | Doctors (I)      | 20         | 13.13      | -6.87      | -34.37% |
|    |                   |          | Nurses (I)       | 135        | 128.76     | -6.25      | -4.63%  |
|    |                   |          | Other Staffs (I) | 112        | 103.69     | -8.31      | -7.42%  |
|    |                   |          | IP Discharge (O) | 2,519      | 3,758.50   | 1,239.50   | 49.21%  |
|    |                   |          | OP Visits (O)    | 40,950     | 61,099.93  | 20,149.93  | 49.21%  |

**TABLE 5.8** Overall output increase or input reduction that is needed for the 7 inefficient hospitals to become more efficient.

|                 | Total Outputs     |                     | Total Inputs |         |        |              |
|-----------------|-------------------|---------------------|--------------|---------|--------|--------------|
|                 | Outpatient Visits | Inpatient Discharge | Beds         | Doctors | Nurses | Other staffs |
| <b>Quantity</b> | 89,058            | 8,364               | 1,679        | 160     | 1,086  | 599          |
| <b>%</b>        | 31%               | 27%                 | -19%         | -34%    | -13%   | -31%         |

For these 7 inefficient hospitals to become relatively efficient, the overall group needs to increase their outpatient visits by 89, 058 (31%), and inpatient discharges by 8, 364 (27%). At the individual level, Alotau Hospital need to increase its outpatient visits and inpatient discharges by about 34%; Boram Hospital ought to increase its outpatient visits and inpatient discharges by 8%; Kavieng Hospital increases its outpatient visits and inpatient discharges by 66% and 91% respectively; Kundiawa and Madang Hospital needed to have increased its outpatient visits and inpatient discharges by 17%; Mendi Hospital should have increased its outpatient visits and inpatient discharges by 45% and finally Wabag Hospital should have increased its outpatient visits and inpatient discharges by 49%. Given the results, Kavieng Hospitals should have utilized more outputs if the inputs were utilized sufficiently or at the given level.

Alternatively, inefficient hospitals should have saved some inputs in the productions. Most of the inputs were not utilized properly to achieve the optimal output level. As shown in table 5.6, the 7 hospitals that were variable returns to scale technically inefficient could also have improved their relative efficiency by reducing their overall inputs by 1,679 (19%) beds, 160 (34%) doctors, 1,086 (13%) nurses and 599 (31%) other staffs.

By individual hospitals can reduce inputs as follows; Alotau Hospital can reduce the number of doctors by 49%, nurses by 23%, and other staff by 46% while maintaining the given level of beds. Boram hospital can reduce the quantities of beds by 11% and other staff by 20% while keeping the doctors and nurses at the given quantity level. Kavieng Hospital can reduce the number of doctors and nurses by 47% and 49% respectively while maintaining the current level of beds and other staff. Kundiawa Hospital can reduce the number of doctors by 69%, nurses by 2%, and other staff by 44% while maintaining the given level of beds. Madang Hospital can reduce the number of beds by 6%, doctors by 7%, and nurses by 17% while maintaining the current level of other staff. Mendi Hospital can reduce 63%, doctors by 4%, and other staff by 49% while maintaining the given level of nurses. Finally, Wabag Hospital can reduce doctors, nurses, and other staff by 34%, 7%, and 5% respectively.

However, one could ask the policy question of what could be done with the access inputs in PNG in 2017? Papua New Guinea's health sector is facing a series of major challenges including an aging workforce crisis at the front-line health service delivery that must be dealt with if it hopes to deliver better health care. A recent study made by (World Bank 2011) revealed that the sector's shortcomings are manifesting themselves in a worrying health picture in terms of maternal and infant mortality and other traditional communicable diseases. Currently, the shortage of doctors, nurses, and other health personnel is an issue, especially in primary health services.

The access inputs (doctors, nurses, and other support staff, etc.) can be redistributed and transferred to primary health care facilities (level 1- 4) to manage this workforce crisis and other necessary resource gaps.

## RESULTS FROM TOBIT REGRESSION MODEL

Table 5.9 presents a summary of the descriptive statistics (observations, mean, standard deviation, minimum, and maximum) for each of the variables used in the Tobit regression model.

**TABLE 5.9** Descriptive Statistics (observation, mean, standard dev, min, and max.

| Variable | Observation | Mean     | Std. Dev. | Minimum | Maximum  |
|----------|-------------|----------|-----------|---------|----------|
| InEff    | 20          | 0.12     | 0.20      | -       | 0.66     |
| AloS     | 20          | 54.95    | 119.26    | 4.35    | 512.87   |
| BOR      | 20          | 1,666.70 | 1,063.88  | 97.00   | 3,163.00 |
| RoBTN    | 20          | 1.59     | 1.48      | 0.07    | 6.97     |
| RoOPTD   | 20          | 3,052.96 | 2,430.51  | 466.11  | 9,235.20 |
| BED      | 20          | 238.75   | 245.95    | 9.00    | 1,096.00 |

The value of the dependent variable censored from below is 0 and censoring from the top is 0.6611296.

The mean value is 12%, with a standard deviation of 20%. Table 5.10 presents the Tobit regression model results. The joint null hypothesis;  $\mathbf{H}_0: \beta_1=\beta_2=\beta_3=\beta_4=\beta_5=0$  is rejected at the 10% percent level of significance (**Prob**  $\chi^2<0.1$ ) Therefore, we can conclude that the regression coefficients for the explanatory variables in our model are not equal to zero. It implies that our model as a whole fits significantly better than an empty model (i.e., a model with no predictors).

**TABLE 5.10** Results from Tobit Regression Model.

| Variable                    | Coefficient | t-ratio | p> t      |
|-----------------------------|-------------|---------|-----------|
| ALoS                        | -0.0037408  | -1.58   | 0.136     |
| BOR                         | 0.0001127   | 1.56    | 0.139     |
| RoBTN                       | 0.1928846   | 2.96    | 0.01      |
| RoOPTD                      | -0.0002339  | -2.17   | 0.047     |
| BED                         | -0.002794   | -2.36   | 0.032     |
| _cons                       | 0.7453091   | 1.66    | 0.117     |
| <b>Observations Summary</b> |             |         |           |
| Number of observations      |             |         | 20        |
| LR Chi2 (5)                 |             |         | 21.05     |
| Prob > Chi2                 |             |         | 0.0008    |
| Log likelihood              |             |         | -1.081256 |
| Pseudo R2                   |             |         | 0.9068    |

In the table, we see that the coefficient for ALoS has a negative sign which is not consistent with the prior expectation and is statistically insignificant. The coefficient for BOR has a positive sign which is also not consistent with the prior expectation and again is insignificant.

The coefficient of RoBTN had a positive sign and is consistent with the prior expectation and statistically significant at a 5% level of significance. In other words, the coefficient for RoBTN was significant because its associated t- value was greater than 0 and the p-value is less than 0.05 (p-value<0.05). A unit increase in the ratio of bed to nurses (RoBTN) would lead to an increase in hospital expected inefficiency score by 0.1929, holding all other variables in the model constant. The higher a hospital's RoBTN, the higher the predicted inefficiency scores would be. This is true because the increase in the beds will increase the RoBTN and that will adversely affect the hospital's efficiency. From the available number of beds, the hospital must have additional nurses to attend to patients per bed effectively to minimize the inefficiency.

The coefficient for RoBTD had a negative sign and was consistent with the prior expectation and was statistically significant as well given its associated p-value was less than 0.05 (p-value <0.05). This implied that a 1-unit increase in RoBTD will decrease the hospital inefficiency scores by 0.0002339 all other factors remain constant. The inefficiency could be minimized by reducing the available doctors for the hospitals having a low performance. This could happen because many doctors don't want to be at rural facilities. Hospitals become their choice of postings and this is becoming a norm in the PNG health system.

Similarly, the coefficient for hospital size (BED) also had negative signs consistent with prior expectation and it's also significant at a 5% level of confidence. This means that hospital size is a significant factor in explaining hospital inefficiency. The results indicated that the predicted inefficiency score for big hospitals is 0.002794 points lower than for small hospitals all other factors in the model remain constant. This suggested that even though the coefficients are not significant but from the result, it could conclude that small hospitals are less efficient than big hospitals.

## LIMITATIONS AND FUTURE STUDIES

The study has several limitations which are mostly related to the availability of the data. Firstly, the key area of limitation included in the study was all provincial hospitals and four referral hospitals. It is however possible that there were differences in the severity of inpatient cases treated in each hospital. The cases can be common or severe depending on the nature of the illnesses. The cases with the common disease have fewer days of admission than the severity. On the other hand, chronic and more severe cases need a longer length of stay and more resource consumption. These groups of patients require more resources including specialist doctors, sophisticated equipment, drugs, and regular attendance and care. The hospitals treating a large number of severe cases, for example, may handle fewer cases and adversely affect aggregate output level, and will thus appear to be relatively inefficient. This data was not available in the PNG National Information System (NHIS). Adjusting for case-mix in the analysis would have helped address this problem and also provide better justification for reductions in input resources or output increases proposed for the hospitals identified by this study.

Secondly, the limitation is distinguished by the unavailability of the various categories of data for health workers (doctors, nurses, clinical officers, laboratory technicians, and anesthetic officers) were all lumped together as medical staff due to the absence of a detailed breakdown of staff categories for all the sampled hospitals. Within the same health workforce category, the quality of labor input may vary depending on individual health worker skills, motivation, and professional experiences. In this case, calculations are necessarily performed by excluding these unavailable data, which is likely to generate different estimates of model parameters and prevent the determination of more accurate estimates and lead to different DEA efficiency scores.

Thirdly, allocative and economic efficiency are perceived as complements to the analysis of technical efficiency. The estimation of allocative efficiency requires data on quantities of health service outputs, health system inputs, and input prices. Nevertheless, the measurement of allocative and economic efficiency is not permitted due to the lack of data on input prices and appropriate panel data limitations. Hence, the study only focused predominantly on technical efficiency and scale efficiency. It is important to note that this study does not attempt to address allocative efficiency and productivity because it was difficult to get accurate input prices and appropriate panel data.

Finally, hospital data does not include specific data that should lead to a deeper understanding of hospital performance. Therefore, results do not provide clear and specific directions that enable the decision-makers and managers in hospitals to implement better policies and planning in terms of wasteful resource reduction or increase output level in terms of patient discharge and outpatient visits.

Therefore, further work is however required to support hospital managers inputting the results to use in enhancing efficiency. Hospitals identified as efficient and inefficient should be investigated further to determine how and why production processes are operating differently at these hospitals. Due to data limitations, some appropriate contextual and environmental factors are not investigated in this study. Among these inputs is the quality of staff (nurses, doctors, and specialists) such as their qualifications and experience including other environmental and contextual factors such as population density, income level,

etc. Generally, future studies need a large sample size inclusive of many necessary input data used in the process of obtaining better results.

## **RECOMMENDATIONS & STUDY CONTRIBUTION**

The following points should address some recommendations for the decision and policy-makers on performance improvements.

Firstly, there is a wide variation in the efficiency scores among the hospitals. The study revealed that 35% of the hospitals in PNG are below the frontier of the pattern of scale efficiency. The study also revealed a significant amount of input resources have been underutilized. They should have been utilized for greater productivity. The policymakers need critical and careful analysis that can enable them to make proper decisions and policies. According to the World Bank report (World Bank, 2011) PNG having a health workforce crisis especially in the rural primary health services. These access inputs can be redistributed to the lower facilities in need to breeze the resources gap for better health care. Hospitals can have more sophisticated management methods for improving hospitals that can help reduce the wasteful utilization of inputs.

In the second analysis, the ratio of beds to nurses was the main driver of the inefficiencies. In other words, the total number of beds per nurse attending to in the hospital was positively correlated to inefficiency. It is recommended that from the available number of beds; the hospitals must have additional nurses to attend to patients per bed effectively to minimize the inefficiency. Policymakers can recommend more nursing positions created and recruited into the government system, especially for those inefficient hospitals. As part of the long-term plans, more nursing colleges can be established to train more personnel. Papua New Guinea is currently having a health workforce crisis due to the aging workforce in the health system. This can provide solutions to efficiency problems.

The findings also indicated that the available doctors allocated to the outpatient services could reduce the performance of the hospitals. Policymakers can have strong management guidelines and policies for hospital managers to allocate doctors within the hospitals. The results and findings from the current study can be used as the guide for managing the allocations of doctors where necessary within the hospitals.

Finally, it was also identified from the results that small hospitals are less efficient than big hospitals. The level of hospitals in PNG is categorized into the level of facilities by the number of doctors, the number of beds, and other standard requirements (National Department of Health (PNG), 2011). Hospitals with fewer beds need beds in proportion to that of the reference set hospitals as benchmarking. This can be used as the guide for supplying beds and increase the hospital size and subsequently reduce inefficiency.

The main contribution of the current study is that this is the first publication of the research for measuring the efficiency of the hospitals using DEA in PNG. The study used patient-level data to determine the hospital aggregated level data because of data limitations. The inpatient data and outpatient data were summarized as total inpatient discharge and outpatient visits respectively for every public hospital. The approach could be generalized to other DEA applications in health care or another public sector when the main type of aggregated data required for DEA applications are not available.



Moreover, this study also extended the Data Envelopment Analysis with Tobit regression model as introduced by Tobin (1958) to determine other contextual factors; the average length of stay, bed occupancy ratio, the ratio of bed to nurses, the ratio of outpatient to doctors and number of beds (to denote the size of the hospitals) that have an impact on the technical efficiencies of the hospitals.

## CONCLUSION

One of the Key Results Areas contained in the Papua New Guinea National Health Plan is to enhance efficiency, equity, and quality of service delivery through health systems development. This study met its objectives in terms of estimating the relative technical and scale efficiencies of public hospitals in Papua New Guinea. The study also quantified the magnitude of output increase or input reductions that was required to improve the inefficient hospital's performances. The study further estimated other institutional or contextual/environmental variables on hospital inefficiencies using Tobit regression analysis.

The findings from the first-stage analysis indicated that 7 (35%) of the hospitals were operating at technical efficiency levels well below the efficient frontier. Other similar studies made by Kirigia et al, (2002) which identified 26% of hospitals were technically inefficient and 29.6% of the hospitals were scale inefficient, Kirigia & Asbu (2013) also identified that 68% of the hospitals were VRS technically efficient and 42 % were scaled efficiently. Another study made by Mujasi et al. (2016) revealed 47% of the hospitals were efficient while 18% were scaled efficiently. Therefore, even if there is no study conducted in Papua New Guinea, the available evidence in the other middle-income countries suggested that the magnitude of inefficiency does vary from country to country. All these inefficiencies have been confirmed by the t-distribution test that there are inefficiencies that exist in PNG hospitals.

The study also revealed that more hospitals did relatively poor, meaning their efficiency scores were below 100%. The empirical evidence from the study suggested that sampled hospitals need to have input and output changes required to make the inefficient hospitals relatively efficient. In other words, significant amounts of inputs were under-utilized. The findings also provided that the ratio of beds to nurses was the main driver of efficiency among the hospitals. Since the inefficiency scores are positively correlated with the bed to nurse's ratio, it concludes that the available number of beds needs additional nurses to reduce the inefficiencies of the hospital.

Other findings related to hospital beds suggested that more beds need to be provided to those hospitals with a smaller number of beds. The ratio of outpatient to doctors also suggested that available doctors need to be reduced and that will increase the outpatient to doctor's ratio and have a subsequent reduction in the inefficiency.

Apart from the findings of this study, other related issues that affect health service delivery in Papua New Guinea is to do with deteriorating road links. The cost of transport is very high and many subsistence farmers can't afford to travel to towns and cities for medical treatments. Residents of some especially in the isolated areas may incur additional costs in travel expenditure. This impedes the movement of people from accessing hospital services

and thus delayed treatments at the hospitals. This could be minimized by establishing an effective referral system from primary care units linked to the respective provincial hospitals. People seeking better health services from their provinces to other provinces could be another reason for inefficiencies. Further work is however required to investigate these environmental factors to know why there are variations inefficiencies in the hospital performances.

However, policymakers need to get insight into mechanisms promoting hospital services utilization. They need to develop appropriate strategies to support hospitals with low efficiency to improve their service and thereby better address the problem of under-utilization of health inputs. Information on medical equipment, specialized doctors, and other necessary resources requirements at the hospitals is necessary for policymakers to make effective policy and planning decisions.

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# THE IMPACT OF EXCHANGE RATE VOLATILITY ON MANUFACTURING EXPORTS FROM THAILAND TO THE MAIN EXPORT MARKETS

by

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## ABSTRACT

Since advent of the floating exchange rate system of Thailand in 1997, the impacts of exchange rate volatility on economic activities, especially on trade flows has been received a great deal of attention. For Thailand, previous studies mostly have investigated the response of aggregate trade flows with the rest of the world to exchange rate volatility, which used the aggregated trade data may suffer from aggregation bias. In this study contributes to the existing literature by investigating the effect of exchange rate volatility and other factors on the export value at an industry-specific level, in case of manufactured products export from Thailand to main trading partners, including the United States, China, and Japan. The short and long-term impacts are estimated using ARDL method over the period of 2005 to 2018. The findings indicate that in the short run, the volatility of the real exchange rate has a significant impact on the manufactured exports to the three main trading partners in most commodities. However, it does not have an effect on the exports to the United States in the long run. The study can be used as a guideline for exporters of each industry to manage the risk of exchange rate by using hedging tools to maintain their targeted export value, costs, and profitability more efficiently. In addition, government and related agencies can use the result to formulate partner-specific trade strategies to encourage export value in each industry.

**KEY WORDS:** Exchange rate volatility, Manufacturing exports, ARDL method, International trade

## INTRODUCTION

International trade is an important activity of an economy and is inseparable from economic development. International trade between different countries is an important factor in raising living standards, providing employment, and enabling consumers to enjoy a greater variety of goods. Thailand is an emerging economy that highly dependent on international trade, as can be seen from the value of exports, which account for more than two-thirds of the GDP (World Bank, 2018). The structure of goods in both imported and exported goods has changed greatly. Previously, most of the major Thai exports were agricultural goods. At the present, Thailand's number one export product is manufactured products as a result of government and trade policies to promote investment in the manufacturing sector and promote the export of manufactured products (Somsaktam, 2016). The country exports manufactured products accounted for 86 percent of total shipments (Trading economics, 2020). The top ten manufactured products that Thailand exports are motor cars, parts and accessories, automatic data processing machines and parts thereof, precious stones and jewelry, rubber products, polymers of ethylene, propylene in primary forms, chemical products, electronic integrated circuits, machinery and parts thereof, iron and steel and their products, and air conditioning machine and parts thereof. The three main manufactured export markets of Thailand are the United States, with an export value of 84.3 billion baht (13.85% of market share), followed China with an export value of 64.5 billion baht (10.59% of market share), and Japan with an export value of 59.9 billion baht (9.84% of market share). (Ministry of Commerce, 2019).

International trade requires payments to take place and countries in the world use different currency systems, thus creating foreign exchange rates and foreign exchange markets. There have been major developments in the international monetary system, i.e. the shift from the fixed rates of currencies to floating exchange rate regimes, after the end of the Bretton Woods system in 1971-1973. Many developed and developing countries have switched to a floating exchange rate system, including the United States and Japan. China switched to a managed float system in 2005, same as Thailand, which has switched to a floating exchange rate system since 1997. Since, then businesses are increasingly exposed to foreign exchange risks (Satawatananon, 2014). If the exchange rate fluctuates significantly compared to the exchange rate of the trading partner, the country with high exchange rate volatility will result in a decrease in the country's exports because when the exchange rate of the exporting country fluctuates greatly, the importing country can't estimate the exact cost, therefore, the importer has reduced the number of imports (Santikulnukan, 2012). It can be seen that exchange rate volatility is one of the major risk factors affecting the Thai export sector and can potentially lead to market uncertainty, volatility in profits of traders, and impacts on production and transaction cost, which is an interesting issue to study of how much exchange rate volatility have influenced on the export value between Thailand and trading partners by using the disaggregated trade data of manufacturing export to increase understanding about exchange rate movements as each industry has its own risk. For benefit to exporters of each manufactured product can use the result of this study to consider whether exchange volatility has a significant impact on export value as a guideline to manage the risk of the exchange rate by using hedging tools to maintain their targeted export value, costs, and profitability more efficiently. In addition, the government can use the result to formulate partner-specific trade strategies and adjust the exchange rate to the appropriate level in order to encourage export value in each industry.

## OBJECTIVES

To investigate the impact of exchange rate volatility and the other factors including the industrial production index and the real exchange rate on Thailand's manufacturing exports to the main export partners, including the United States, China, and Japan.

## LITERATURE REVIEW

The relationship of exchange rate volatility with international trade has been extensively studied in the literature but there is no unanimity about this relationship. Literature can be divided into three groups: The first group argues in favor of a positive relationship of exchange rate volatility with trade, the second group argues about the negative relationship and the last group found no relationship between exchange rate volatility and trade. The empirical studies that show the positive relationship between exchange rate volatility and international trade are McKenzie and Brooks (1997), this study analyses the effect of exchange rate volatility on Germany-US bilateral trade flows for the period 1973:4–1992:9. ARCH models are used to generate a measure of exchange rate volatility and then tested against Germany's exports to the U.S. and imports from the US. This paper found the effects of volatility to be positive and statistically significant for the period under review. The exchange rate volatility can positively affect international trade because if exporters are sufficiently risk-averse, an increase in exchange-rate volatility raises the expected marginal utility of export revenue and therefore induces them to increase exports. The majority of empirical work resulted in the negative relationship between exchange rate volatility and trade flow supporting a range of theoretical models that conventionally predict such an effect. The studies highlighted that the fluctuations in the exchange rate can adversely affect the trading activity and ultimately the trading volume can be decreased. These studies include Kim (2017) used monthly data from 2000 to 2015 to analyze the effects of USD/KRW exchange rate volatility on seaborne import volume in Korea. The results of an autoregressive distributed lag (ARDL) analysis indicate that USD/KRW exchange rate volatility has a statistically significant negative influence on Korea's seaborne import volume. Nishimura and Hirayama (2013) provided empirical evidence of the effect of exchange rate volatility on Japan-China trade. The findings illustrate that although the exchange rate variation did not affect Japan's exports to China, it had a negative influence on the reverse direction of trade exporting from China to Japan during the reform stage. Vongphanthong (2014) investigated the impact of fluctuations in exchange rates, consumer price index, and real gross domestic product of Thailand compared with Laos on the real value of exports of the country. The study used a GARCH model to estimate the volatility of the exchange rate and modified this model with a linear regression model to analyze factors that influence the export of Laos. The study found that the variable which affects the real export value is the fluctuation of the exchange rate in a negative direction that was as the hypothesis. Some empirical studies indicate no significance of the exchange rate volatility effect on trade flows. Some examples of these papers are Dimitrios and Paul (2008) show that the impact of exchange rate volatility on real aggregate export of the countries: Norway, Poland, Hungary, Switzerland. It uses the standard deviation of the moving average of the log of the real exchange rate as a measure of exchange rate volatility. The empirical results support was generated using the cointegration, regression. Overall results suggest that exchange rate volatility has no major effects on aggregate export for the E.U. countries.

To explaining export performance is to embrace the theory underlying export demand models. Theory suggests the basic model is the imperfect substitutes model proposed by Goldstein and Khan (1985). The major assumption of this model is that neither imports nor exports are perfect substitutes for domestic goods. The imperfect substitute model postulates that the quantity of export demand is a function of the level of income in the importing region, the exchange rate, and the relative price. Considering exchange rates, these are relevant for trade since it allows for comparing prices within different economies. Krugman and Obstfeld (2003) explain that “all else equal, appreciation of a country's cur-



rency raises the price of its exports and lowers the price of its imports. In contrast, the depreciation lowers the price of a country's exports and raises the price of its imports". In accordance with the theory, the model given should include a measure of volatility. Volatility makes exporters more uncertain about the revenues they will receive which eventually decrease trade volumes. The effect of uncertainty on trade increases with the degree of risk aversion, there is at least one source of volatility that could affect export volumes namely, exchange rate volatility. The reviewed literature showed that it is also the most adopted approach in empirical studies (Pujula and Zapata, 2013).

## METHODOLOGY

### Data

The analysis of the effect of exchange rate volatility on Thailand's manufacturing exports to the main export partners, including the United States, China, and Japan uses monthly secondary data for the period when all countries applied the floating exchange rate system from 2005 to 2018, which has dependent variable is the export value of the top ten manufactured products from Thailand to the three main export partners, the data was collected from the Ministry of Commerce and independent variables are the real exchange rate volatility, estimated via a GARCH approach, the real exchange rate between the Thai Baht (THB) and the three different currencies of the partner countries; the United States Dollar (USD), Chinese Yuan (CNY), and Japanese Yen (JPY), which can measure by the calculation of multiplying the relative price and the nominal exchange rates and the index of the industrial production was sourced from the International Financial Statistic.

### Research analysis

The specific aim of this study is to examine the effect of exchange rate volatility on Thailand's top ten manufacturing exports to the three main export partners and also considers the other factors, which can determine export demand including the real exchange rate and the industrial production index that used as a proxy for the income of the export destination countries. The study adopted and modified the analysis model was used by Bahmani-Oskooee, M., & Aftab, M. (2017) in their studies. An export demand function is proposed as a function of income of trading partners, real exchange rate, and real exchange rate volatility as:

$$\ln EX_{ikt}^{TH} = \beta_0 + \beta_1 \ln IIP_{it} + \beta_2 \ln RER_{it} + \beta_3 \ln VOL_{it} + \varepsilon_t$$

Where,

$EX_{ikt}^{TH}$  = Manufacturing export value of the products  $k$  from Thailand to its export partners  $i$   
 $IIP_{it}$  = The index of industrial production is used as a proxy for the income of the export destination countries  $i$  are measured by the changes in the volume of production of a basket of industrial products over a period of time, relative to a base year. It is a monthly indicator that the value added by industrial production represented a substantial share of the income of the country or GDP (Fulop and Gyomai, 2012).

$RER_{it}$  = The real exchange rate between the Thai Baht and the currency of export partners  $i$  are measured by multiplying the relative price and the exchange rates. The relative price is the ratio of the consumer price index (CPI) of export partners  $i$  to the CPI of Thailand

$VOL_{it}$  = The volatility of the real exchange rate between the Thai Baht and its export partners  $i$  are measured by the GARCH model.

This study applies the Autoregressive Distributed Lag (ARDL) approach to estimate the model. The ARDL has the ability to estimate the long and short-run relationships at the same time. In addition, this approach is applicable for the variable with mixed order of integration, the steps are as follows:

- 1) Calculate the real exchange rate volatility since volatility is not directly perceived, it is estimated from the real exchange rate employing the GARCH approach. The GARCH model uses values of the past squared observations and past variances to model the variance at time. It is an extension of the ARCH model that incorporates a moving average component together with the autoregressive component (Brownlee, 2018).
- 2) Test unit root of the data because it is crucial to ensure that these variables do not have a higher order of integration than I(1) by using the ADF test.
- 3) ARDL bound testing approach for co-integration, it is proper to incorporate the short-run dynamics of the adjustment mechanism into the estimation process by specifying it in an error-correction format as follows.

$$\begin{aligned} \Delta \ln EX_{ikt}^{TH} = & \alpha_0 + \sum_{j=1}^l \alpha_1 \Delta \ln EX_{ikt-j}^{TH} + \sum_{j=0}^l \alpha_2 \Delta \ln IIP_{it-j} + \sum_{j=0}^l \alpha_3 \Delta \ln RER_{it-j} \\ & + \sum_{j=0}^l \alpha_4 \Delta \ln VOL_{it-j} + \delta_0 \ln EX_{ikt-1}^{TH} + \delta_1 \ln IIP_{it-1} + \delta_2 \ln RER_{it-1} + \delta_3 \ln VOL_{it-1} \\ & + \varepsilon_t \end{aligned}$$

The null hypothesis of no co-integration is tested by the use of F-statistic. If the computed F-statistics is higher than the appropriate upper bound of the critical value, the null hypothesis is rejected and the alternative is adopted.

- 4) ARDL estimation, if there is evidence of the existence of long-run relationship (co-integration) of the variables, then the short-run and long-run effects are estimated by the long-run effects are judged by the coefficient estimates of  $\delta_1 - \delta_3$  normalized on  $\delta_0$  and the short-run effects are judged by coefficient estimates attached to first-differenced variables  $\alpha_1 - \alpha_4$ . In addition, the estimation coefficient of  $ECM_{it-1}$  will indicate the speed of adjustment toward long-run equilibrium.

## THE RESULTS OF THE STUDY

The result of the GARCH model for estimate the real exchange rate volatility of the three main export partners is presented in Table 1, the coefficients of the constant variance term, the ARCH and GARCH parameters of the United States and China are positive and statistically significant at 1% level and GARCH parameters for Japan is statistically significant at 5% level means that it is possible to reject the null hypothesis and suggesting to accept the alternative hypothesis of heteroscedasticity, which indicate the presence of volatility. The conditional

bilateral real exchange rate volatility is depicted graphically in Figure 1, Figure 2, and Figure 3.

**TABLE 1.** The GARCH model

| Real Exchange Rate       | The United States | China       | Japan       |
|--------------------------|-------------------|-------------|-------------|
| Variable                 |                   |             |             |
| C                        | 31.90120***       | 4.958635*** | 0.277975*** |
| <b>Variance Equation</b> |                   |             |             |
| C                        | 0.122820          | 0.003915    | 0.000002    |
| ARCH(1)                  | 1.004734***       | 1.219072*** | 1.082036*** |
| GARCH(1)                 | 0.982159***       | 0.872737*** | 0.723815**  |

Notes: \*\*\*, \*\*, \* represents 1%, 5%, and 10% significance level, respectively.

Source: Calculation

**FIGURE 1:** Exchange rate volatility of US Dollar (USD) to Thai Baht (THB)

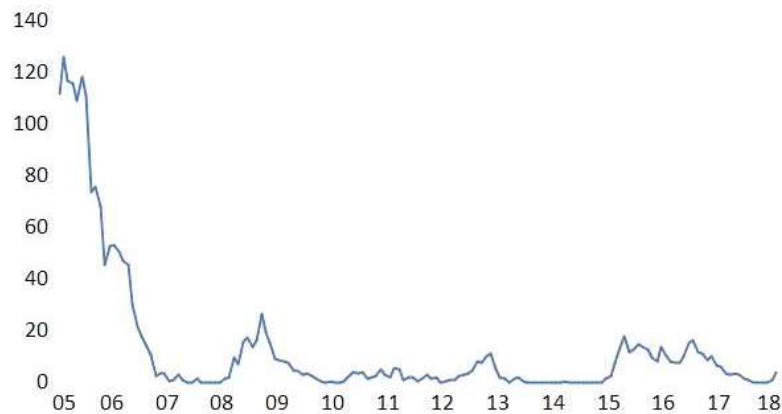


**FIGURE 2:** Exchange rate volatility of Chinese Yuan (CNY) to Thai Baht (THB)

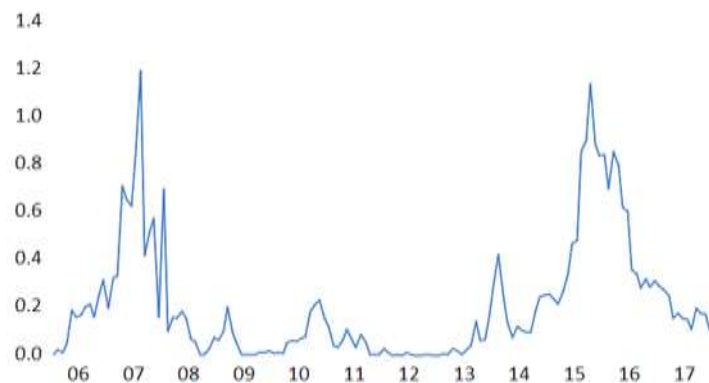
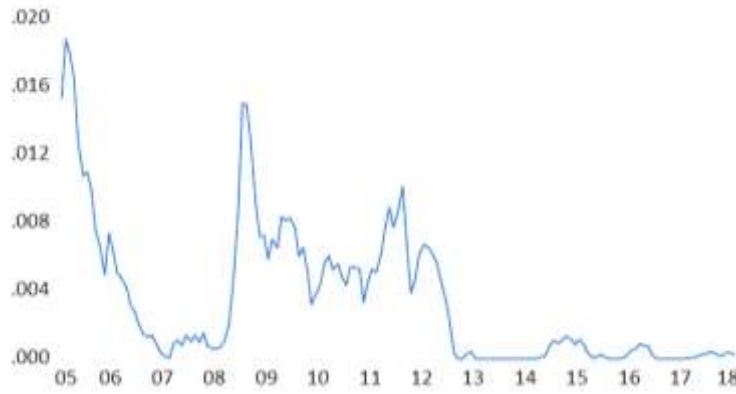


**FIGURE 3:** Exchange rate volatility of Japanese Yen (JPY) to Thai Baht (THB)



Before estimating the ARDL method, it is necessary to determine the stationarity of the variables because it is crucial to ensure that these variables do not have a higher order of integration than I(1). This analysis is usually done using the ADF test (Dickey and Fuller, 1981). The results of ADF unit root testing for variables of the three main export partners are shown in Table 2.

**TABLE 2.** The unit root test.

| Variables                                              | US        |                  | China      |                  | Japan     |                  |
|--------------------------------------------------------|-----------|------------------|------------|------------------|-----------|------------------|
|                                                        | level     | First difference | level      | First difference | level     | First difference |
| RER                                                    | -2.551    | -13.044***       | -2.337     | -15.885***       | -2.681    | -8.696***        |
| IIP                                                    | -3.823**  | -2.313           | -3.264*    | -4.128***        | -3.089    | -3.200*          |
| VOL                                                    | -3.593**  | -12.996***       | -2.300     | -18.007***       | -4.658*** | -9.005***        |
| Motor cars, parts, and accessories                     | -2.923    | -13.767***       | -1.757     | -14.058***       | -7.830*** | -9.594***        |
| Automatic data processing machines and parts thereof   | -3.239*   | -7.966***        | -3.656**   | -14.095***       | -8.054*** | -9.226***        |
| Precious stones and jewelry                            | -2.220    | -5.656***        | -11.357*** | -8.326***        | -3.996*** | -14.855***       |
| Rubber products                                        | -1.645    | -13.369***       | -3.249*    | -13.094***       | -7.946*** | -14.554***       |
| Polymers of ethylene, propylene, etc. in primary forms | -2.911    | -13.890***       | -4.700***  | -12.350***       | -3.331*   | -18.179***       |
| Chemical products                                      | -5.647*** | -13.968***       | -2.358     | -12.893***       | -5.258*** | -13.807***       |
| Electronic integrated circuits                         | -1.959    | -14.064***       | -4.015***  | -8.636***        | -2.835    | -8.361***        |
| Machinery and parts thereof                            | -5.530*** | -12.583***       | -12.265*** | -8.095***        | -3.582**  | -9.439***        |
| Iron and steel and their products                      | -2.597    | -26.693***       | -5.743***  | -13.616***       | -9.149*** | -12.957***       |
| Air conditioning machine and parts thereof             | -7.682*** | -9.196***        | -7.444***  | -17.385***       | -7.112*** | -10.963***       |

Notes: \*\*\*, \*\*, \* represents 1%, 5%, and 10% significance level, respectively.

Source: Calculation

From Table 2, it is seen that in the case of the United States, most of the variables are I(0) except real exchange rate variable, export values of motor cars, precious stone, rubber products, polymers of ethylene, electronic integrated circuits, and Iron products are I(1). In the case of China, the real exchange rate, the volatility, and the export values of motor cars and chemical products are I(1) while the remaining variables are I(0). For Japan, there are 3 variables are I(1) including real exchange rate, the index of industrial production, and export value of electronic integrated circuits while the remaining variables are I(0). Therefore, this means in this paper contains variables with different orders of integration and all the variables are not integrated of a higher order than one, i.e., I(2) or higher, then ARDL modeling suggested by Pesaran and Shin (1999) and Pesaran et al.(2001) will be used.

**TABLE 3.** Co-integration Testing

| Products                                               | US     |             | China  |             | Japan  |             |
|--------------------------------------------------------|--------|-------------|--------|-------------|--------|-------------|
|                                                        | F-test | $ECM_{t-1}$ | F-test | $ECM_{t-1}$ | F-test | $ECM_{t-1}$ |
| Motor cars, parts, and accessories                     | 0.825  | -0.077**    | 1.883  | 0.002***    | 1.501  | -0.117***   |
| Automatic data processing machines and parts thereof   | 1.215  | -0.143***   | 4.737  | -0.308***   | 10.55  | -0.544***   |
| Precious stones and jewelry                            | 5.698  | -0.657***   | 2.053  | -0.304***   | 1.217  | -0.152***   |
| Rubber products                                        | 2.264  | -0.009***   | 0.788  | -0.060**    | 1.757  | -0.139***   |
| Polymers of ethylene, propylene, etc. in primary forms | 2.897  | -0.290***   | 1.015  | -0.073**    | 1.214  | -0.046***   |
| Chemical products                                      | 1.414  | -0.092***   | 5.349  | -0.166***   | 2.155  | -0.218***   |
| Electronic integrated circuits                         | 3.413  | -0.300***   | 1.540  | -0.154***   | 1.000  | -0.078**    |
| Machinery and parts thereof                            | 1.242  | -0.039***   | 1.741  | -0.172***   | 1.018  | -0.117**    |
| Iron and steel and their products                      | 1.976  | -0.306***   | 5.005  | -0.374***   | 5.396  | -0.438***   |
| Air conditioning machine and parts thereof             | 12.200 | -0.730***   | 8.064  | -0.461***   | 9.907  | -0.594***   |

Notes: \*\*\*, \*\*, \* represents 1%, 5%, and 10% significance level, respectively.

The upper bound critical value of the F-statistics, used for testing cointegration in each model, comes from Pesaran *et al.* (2001); Table CI(iii), Case III, p. 300. In this paper, at the 10% level of significance, with the numbers of explanatory variables (K) = 3, the upper bound critical value is 3.20

Source: Calculation

Following Pesaran et al. (2001), F-test is used to establish the joint significance of lagged level variables as a sign of co-integration. Furthermore, the value of  $ECM_{t-1}$  also indicates the presence of co-integration among the other variables included in the model. The  $ECM_{t-1}$  explains the speed of adjustment in the long-run equilibrium. The results of co-integration analysis use F-test and  $ECM_{t-1}$  for Thailand manufactured exports to trading partners for 10 products are reported in Table 3. Based on the F-statistic test to co-integration, we find that 3 export products of the United States where estimated F-statistic is higher than 3.20 upper bound value which are the following products: precious stones, electronic integrated circuits, and air conditioning machine. For China, there are 4 export products that F-statistic indicated significantly, that is automatic data processing machines, chemical products, Iron and steel, and, air conditioning machine. For Japan, there are 3 products (automatic data processing machines, Iron and steel, and, air conditioning machine) that F-statistic is higher than 3.20 upper bound

value. As for the rest of the products, we find that the F-statistic value is lower than 3.20 upper bound value or not significant. Thus the null hypothesis of no co-integration is accepted in these products. So, we use  $ECM_{t-1}$  as an alternative test. After extending the co-integration analysis to  $ECM_{t-1}$  test, we find that the coefficient estimate of  $ECM_{t-1}$  of 10 export products of the three countries is negative and statistically significant, which means that all products adjustment is toward long-run equilibrium, though with different speeds. Therefore, it was found the existence of the long-run relationship, which supports co-integration among the variables in the export demand.

### ARDL Estimation

Once testing for co-integration, the ARDL model could be implemented to estimate the short-run and the long-run effects among the variables that present significant co-integration. The study imposes a maximum of eight lags on each first-differenced variable and the optimum number of lags is selected by Akaike's Information Criterion (AIC) in each case. The long-run coefficient estimates are shown in Table 4 and because of a vast volume of short-run results, only the optimum models of the short-run coefficient estimates are selected to report in Table 5, Table 6, and Table 7, respectively.

**TABLE 4.** The Long-Run Coefficient Estimates

| Products                                              | lnIIP    |          |          | lnRER   |          |        | lnvol  |           |         |
|-------------------------------------------------------|----------|----------|----------|---------|----------|--------|--------|-----------|---------|
|                                                       | US       | China    | Japan    | US      | China    | Japan  | US     | China     | Japan   |
| Motor cars, parts, and accessories                    | 0.247    | -0.297   | -0.188   | 0.125   | 0.657*   | -0.226 | -0.005 | 0.031*    | 0.016   |
| Automatic data processing machines and parts thereof  | 0.604*   | -0.308** | 0.627*** | 0.117   | -0.635** | 0.363* | -0.001 | -0.008    | 0.000   |
| Precious stones and jewelry                           | 0.822**  | 1.636*** | -0.322   | -0.241  | 0.446    | -0.169 | 0.005  | 0.012     | 0.001   |
| Rubber products                                       | -0.235   | 0.118    | -0.060   | 0.192   | 0.022    | 0.209  | -0.001 | -0.012    | -0.016  |
| Polymers of ethylene, propylene, etc in primary forms | 1.324*** | 0.038    | -0.007   | 0.357   | 0.150    | 0.312  | 0.022  | -0.007    | -0.023* |
| Chemical products                                     | 0.699    | 0.219*   | 0.000    | -0.360  | -0.327   | -0.238 | -0.001 | -0.028*** | 0.003   |
| Electronic integrated circuits                        | 1.129*** | 0.009    | 0.178    | 0.340*  | 0.312    | -0.247 | 0.002  | 0.020     | 0.012   |
| Machinery and parts thereof                           | 0.158    | 0.069    | -0.132   | -0.013  | 0.678    | -0.212 | -0.017 | 0.018     | 0.001   |
| Iron and steel and their products                     | 2.295*** | 0.223    | -0.046   | 0.712*  | 0.897*   | -0.211 | 0.004  | 0.043*    | -0.004  |
| Air conditioning machine and parts thereof            | 4.014*** | 0.345    | -0.001   | -1.037* | 1.513*** | -0.185 | 0.045  | -0.010    | -0.013  |

Notes: \*\*\*, \*\*, \* represents 1%, 5%, and 10% significance level, respectively.

Source: Calculation

**TABLE 5.** The Short-Run Coefficient Estimates of the United States

| Variable        | Motor cars | Automatic machines | Precious stones, jewelry | Rubber products | Poly-mers of ethylene | Chemical products | Electronic integrated circuits | Machinery and parts thereof | Iron and steel | Air condition machine |
|-----------------|------------|--------------------|--------------------------|-----------------|-----------------------|-------------------|--------------------------------|-----------------------------|----------------|-----------------------|
| $\ln EX_{t-1}$  | -0.432***  | -0.444***          | -0.131                   | -0.777***       | -0.244***             | -0.636***         | -0.492***                      | -0.573***                   | -0.550***      |                       |
| $\ln EX_{t-2}$  | -0.170**   | -0.154*            | 0.046                    | -0.332***       | 0.129                 | -0.513***         | -0.210***                      | -0.472***                   | -0.181*        |                       |
| $\ln EX_{t-3}$  |            | 0.091              | -0.157*                  | -0.166*         | 0.054                 | -0.523***         |                                | -0.225**                    | -0.164**       |                       |
| $\ln EX_{t-4}$  |            | -0.176*            | 0.255***                 |                 | -0.131                | -0.436***         |                                | -0.271***                   |                |                       |
| $\ln EX_{t-5}$  |            | -0.190**           |                          |                 | -0.072                | -0.456***         |                                | -0.266***                   |                |                       |
| $\ln EX_{t-6}$  |            |                    |                          |                 |                       | -0.319***         |                                | -0.301***                   |                |                       |
| $\ln EX_{t-7}$  |            |                    |                          |                 |                       | -0.242***         |                                | -0.327***                   |                |                       |
| $\ln IIP_t$     | 4.282***   | 2.940***           | 1.972*                   | 3.128***        |                       |                   | 1.956***                       | 0.979                       | 5.416***       |                       |
| $\ln IIP_{t-1}$ | 3.738***   | 0.396              | -4.480***                | 1.960***        |                       |                   | 1.090                          | 2.475**                     | 2.718          |                       |
| $\ln IIP_{t-2}$ | 1.709      | -0.266             | 4.301***                 | 1.116*          |                       |                   | 1.155*                         | 3.882***                    | 0.611          |                       |
| $\ln IIP_{t-3}$ |            | 0.834              | 4.043***                 |                 |                       |                   | 1.135*                         | 1.152                       | 3.455*         |                       |
| $\ln IIP_{t-4}$ |            | 1.593*             | 4.354***                 |                 |                       |                   | -0.093                         | -1.083                      | 3.323*         |                       |
| $\ln IIP_{t-5}$ |            | -2.299***          | 1.509                    |                 |                       |                   | -2.082***                      | -2.714**                    | -3.317*        |                       |
| $\ln IIP_{t-6}$ |            | -1.209             | -5.703***                |                 |                       |                   | -1.839***                      | 0.655                       | -2.055         |                       |
| $\ln IIP_{t-7}$ |            |                    | 1.759                    |                 |                       |                   |                                | 2.427**                     | 3.106**        |                       |
| $\ln RER_t$     | -0.853     |                    | -1.057                   | 0.408           |                       | 1.735             | -0.922*                        |                             | 1.713          |                       |
| $\ln RER_{t-1}$ | -0.709     |                    | 1.981***                 | 0.763**         |                       | -0.934            |                                |                             | -0.482         |                       |
| $\ln RER_{t-2}$ | 0.944      |                    | 2.268***                 | 0.705*          |                       | -1.443            |                                |                             | 0.826          |                       |
| $\ln RER_{t-3}$ | 2.103***   |                    |                          | 0.606           |                       | 1.730             |                                |                             | 1.559          |                       |
| $\ln RER_{t-4}$ |            |                    |                          | -0.460          |                       | -2.200*           |                                |                             | -0.205         |                       |
| $\ln RER_{t-5}$ |            |                    |                          | -0.818**        |                       |                   |                                |                             | 1.249          |                       |
| $\ln RER_{t-6}$ |            |                    |                          | 0.349           |                       |                   |                                |                             | 3.130***       |                       |
| $\ln RER_{t-7}$ |            |                    |                          | -0.812**        |                       |                   |                                |                             | -4.497***      |                       |
| $\ln VOL_t$     |            | 0.023              | 0.057***                 | 0.037***        | 0.033                 |                   | 0.032***                       | 0.037*                      |                |                       |
| $\ln VOL_{t-1}$ |            |                    |                          | -0.007          | -0.062***             |                   |                                | 0.053***                    |                |                       |
| $\ln VOL_{t-2}$ |            |                    |                          | 0.022*          | -0.037                |                   |                                | 0.062***                    |                |                       |

Notes: \*\*\*, \*\*, \* represents 1%, 5%, and 10% significance level, respectively.

Source: Calculation

### Analysis of the United States

From the short-run estimates, as reported in Table 5 shows the impact of the explanatory variables of exports from Thailand to the United States. The results indicate that 5 out of 10 export products (precious stone, rubber, polymers of ethylene, electronic integrated circuits, and, machinery and parts thereof) carried at least one significant coefficient of volatility ( $\ln VOL_{t-i}$ ) effect at least at ten percent level of confidence. Only in the case of the polymers of ethylene that volatility has a significant negative impact on exports. A negative value of the exchange rate volatility suggests that exports are affected by high volatility. For the other explanatory variables, the real exchange rate ( $\ln RER_{t-i}$ ) significantly effect on 6 export products (motor cars, precious stone, rubber, chemical product, electronic integrated circuits, and, Iron and steel). Results also show that the index of industrial production ( $\ln IIP_{t-i}$ ) that is used as a proxy for the income of the export destination countries is significant effects on 7 export products except for polymers of ethylene, chemical product, and air conditioning machine. Focusing on the long-run estimates results in Table 4, among 10 products, the effect of exchange rate volatility on exports does not have the short-run effects last into the long run. Furthermore, the findings of the long-run estimates indicate that the other factors in the export demand function, the impact of the IIP has a significant positive effect on exports within 6 groups of products: automatic data processing machine, precious stones, polymers of ethylene, electronic integrated circuits, Iron and steel, and, air conditioning machine. Moreover,

the real exchange rate also has a significant positive effect on 3 manufactured exports (electronic integrated circuits, iron and steel, and, air conditioning machine) at ten percent level of confidence.

**TABLE 6.** The Short-Run Coefficient Estimates of China

| Variable        | Motor cars | Automatic machines | Precious stones, jewelry | Rubber products | Polymers of ethylene | Chemical products | Electronic integrated circuits | Machinery and parts thereof | Iron and steel | Air conditioning machine |
|-----------------|------------|--------------------|--------------------------|-----------------|----------------------|-------------------|--------------------------------|-----------------------------|----------------|--------------------------|
| $\ln EX_{t-1}$  | -0.241***  | 0.081              | -0.520***                |                 | -0.274***            | -0.490***         | -0.103                         | -0.703***                   | -0.122         |                          |
| $\ln EX_{t-2}$  | -0.327***  |                    | -0.496***                |                 | -0.142*              | -0.211**          | 0.030                          | -0.516***                   | -0.149*        |                          |
| $\ln EX_{t-3}$  | -0.278***  |                    | -0.405***                |                 |                      | -0.117            | 0.111                          | -0.365***                   |                |                          |
| $\ln EX_{t-4}$  | -0.164*    |                    | -0.293***                |                 |                      |                   | -0.230***                      | -0.264**                    |                |                          |
| $\ln EX_{t-5}$  | -0.019     |                    | -0.242**                 |                 |                      |                   | -0.192**                       | -0.205*                     |                |                          |
| $\ln EX_{t-6}$  | -0.312***  |                    | -0.113                   |                 |                      |                   |                                | -0.129                      |                |                          |
| $\ln EX_{t-7}$  |            |                    |                          |                 |                      |                   |                                | -0.160**                    |                |                          |
| $\ln IIP_t$     | 0.393      | 0.272*             |                          | -0.147          | 0.152                | 0.319***          | 0.694***                       | 1.240***                    | 0.738***       | 0.128                    |
| $\ln IIP_{t-1}$ | -0.385     | 0.115              |                          | -0.418**        | 0.194                | -0.238*           | 0.131                          | -0.517                      |                | -0.719***                |
| $\ln IIP_{t-2}$ | 0.791***   | 0.511***           |                          |                 | 0.386***             |                   | 0.635**                        | 0.170                       |                |                          |
| $\ln IIP_{t-3}$ |            |                    |                          |                 | 0.254**              |                   | 0.057                          | 0.087                       |                |                          |
| $\ln IIP_{t-4}$ |            |                    |                          |                 |                      |                   | 0.378                          | 0.914***                    |                |                          |
| $\ln IIP_{t-5}$ |            |                    |                          |                 |                      |                   | -0.549*                        |                             |                |                          |
| $\ln IIP_{t-6}$ |            |                    |                          |                 |                      |                   | -0.360                         |                             |                |                          |
| $\ln IIP_{t-7}$ |            |                    |                          |                 |                      |                   | -0.551**                       |                             |                |                          |
| $\ln RER_t$     |            |                    |                          |                 | 0.380                |                   | -1.616                         | -0.914                      |                |                          |
| $\ln RER_{t-1}$ |            |                    |                          |                 | -0.657               |                   |                                | -2.406                      |                |                          |
| $\ln RER_{t-2}$ |            |                    |                          |                 | 0.582                |                   |                                | -2.292                      |                |                          |
| $\ln RER_{t-3}$ |            |                    |                          |                 | -0.191               |                   |                                | -2.001                      |                |                          |
| $\ln RER_{t-4}$ |            |                    |                          |                 | -1.282**             |                   |                                | -3.361**                    |                |                          |
| $\ln VOL_t$     |            |                    | -0.147                   |                 | -0.001               |                   |                                |                             | -0.032         | -0.028                   |
| $\ln VOL_{t-1}$ |            |                    |                          |                 | 0.023                |                   |                                |                             | -0.081*        | -0.025                   |
| $\ln VOL_{t-2}$ |            |                    |                          |                 | 0.032**              |                   |                                |                             | -0.123***      | -0.111***                |
| $\ln VOL_{t-3}$ |            |                    |                          |                 | 0.052***             |                   |                                |                             |                |                          |
| $\ln VOL_{t-4}$ |            |                    |                          |                 | 0.028*               |                   |                                |                             |                |                          |

Notes: \*\*\*, \*\*, \* represents 1%, 5%, and 10% significance level, respectively.

Source: Calculation

## Analysis of China

The results of the short-run estimates for China show the effect of exchange rate volatility ( $\ln VOL_{t-i}$ ) only affects 3 export products, which are polymers of ethylene, iron and steel, and, air conditioning machine at least at ten percent level of confidence. The other determinant of export demand function, the real exchange rate ( $\ln RER_{t-i}$ ) has a negative effect on 2 export products, i.e. polymers of ethylene and machinery and parts thereof. Results also show that the index of industrial production ( $\ln IIP_{t-i}$ ) is significant effects on 9 export products except for precious stones. Once again, Table 4 shows the result of long-run coefficient estimates. The exchange rate volatility is significantly affected on 3 manufactured exports of Thailand to China: motor cars, chemical products, and, iron and steel. The impact of IIP also has a significant effect on exports within 3 groups of products (automatic data processing machine, precious stones, and, chemical products). Meanwhile, in the long run, the real exchange rate has a significant effect on 4 export products, that is motor cars, automatic data processing machines, iron and steel, and, air conditioning machines.



**TABLE 7.** The Short-Run Coefficient Estimates of Japan

| Variable        | Motor cars | Automatic machines | Precious stones, jewelry | Rubber products | Polymers of ethylene | Chemical products | Electronic integrated circuits | Machinery and parts thereof | Iron and steel | Air condition machine |
|-----------------|------------|--------------------|--------------------------|-----------------|----------------------|-------------------|--------------------------------|-----------------------------|----------------|-----------------------|
| $\ln EX_{t-1}$  | -0.487***  |                    | -0.644***                | -0.616***       | -0.517***            | -0.555***         | -0.599***                      | -0.652***                   | -0.244***      | 0.205***              |
| $\ln EX_{t-2}$  | -0.270***  |                    | -0.349***                | -0.462***       | -0.281***            | -0.273***         | -0.580***                      | -0.522***                   |                | 0.289***              |
| $\ln EX_{t-3}$  | -0.313***  |                    | -0.138*                  | -0.195**        | -0.084               |                   | -0.206**                       | -0.343***                   |                | 0.269***              |
| $\ln EX_{t-4}$  | -0.422***  |                    |                          | -0.196**        | -0.123               |                   | -0.269***                      | -0.425***                   |                |                       |
| $\ln EX_{t-5}$  |            |                    |                          |                 | -0.234***            |                   | -0.160**                       | -0.158*                     |                |                       |
| $\ln EX_{t-6}$  |            |                    |                          |                 | -0.355***            |                   |                                |                             |                |                       |
| $\ln EX_{t-7}$  |            |                    |                          |                 | -0.121               |                   |                                |                             |                |                       |
| $\ln IIP_t$     | 1.133***   | 0.932***           | 0.680**                  | 0.575***        | 0.411*               |                   | 1.024***                       | 0.830***                    | 0.396**        | 0.0003                |
| $\ln IIP_{t-1}$ | 0.918***   | -0.610***          | 0.765***                 | 0.208           | 0.536***             |                   | 0.977***                       | 0.702***                    |                | -0.984***             |
| $\ln IIP_{t-2}$ | 1.895***   |                    | 0.723**                  | 0.623***        |                      |                   | 0.766**                        | 0.856***                    |                | -0.573                |
| $\ln IIP_{t-3}$ | 1.344***   |                    |                          | 0.780***        |                      |                   | 1.051***                       | 1.127***                    |                | -0.380                |
| $\ln IIP_{t-4}$ | 0.561*     |                    |                          | 0.675***        |                      |                   | 0.013                          | 0.573**                     |                | -0.220                |
| $\ln IIP_{t-5}$ |            |                    |                          | 0.354**         |                      |                   | -0.723**                       | 0.452*                      |                | -1.152***             |
| $\ln IIP_{t-6}$ |            |                    |                          |                 |                      |                   | -1.019***                      |                             |                | -0.564                |
| $\ln IIP_{t-7}$ |            |                    |                          |                 |                      |                   | -1.013***                      |                             |                |                       |
| $\ln RER_t$     | 1.082      |                    | 1.164                    | 1.048***        |                      | 0.888*            | 1.452**                        |                             | 0.946*         | 1.039                 |
| $\ln RER_{t-1}$ |            |                    | 1.531**                  | 0.643           |                      |                   |                                |                             |                | -1.696**              |
| $\ln RER_{t-2}$ |            |                    |                          | -0.483          |                      |                   |                                |                             |                |                       |
| $\ln RER_{t-3}$ |            |                    |                          | 0.598           |                      |                   |                                |                             |                |                       |
| $\ln RER_{t-4}$ |            |                    |                          | -1.414***       |                      |                   |                                |                             |                |                       |
| $\ln VOL_t$     |            |                    |                          | -0.020          | -0.011               |                   |                                |                             |                |                       |
| $\ln VOL_{t-1}$ |            |                    |                          | -0.003          | 0.036                |                   |                                |                             |                |                       |
| $\ln VOL_{t-2}$ |            |                    |                          | 0.014           | -0.059***            |                   |                                |                             |                |                       |
| $\ln VOL_{t-3}$ |            |                    |                          | 0.038***        |                      |                   |                                |                             |                |                       |
| $\ln VOL_{t-4}$ |            |                    |                          | 0.031**         |                      |                   |                                |                             |                |                       |
| $\ln VOL_{t-5}$ |            |                    |                          | 0.008           |                      |                   |                                |                             |                |                       |
| $\ln VOL_{t-6}$ |            |                    |                          | 0.024*          |                      |                   |                                |                             |                |                       |
| $\ln VOL_{t-7}$ |            |                    |                          | -0.029**        |                      |                   |                                |                             |                |                       |

Notes: \*\*\*, \*\*, \* represents 1%, 5%, and 10% significance level, respectively.

Source: Calculation

## Analysis of Japan

As can be seen from Table 7, the impact of the short-term exchange rate volatility ( $\ln VOL_{t-i}$ ) on Thailand's exports to Japan only affects 2 export products, i.e. rubber and polymers of ethylene at least at ten percent level of confidence. While, the other explanatory variable, the real exchange rate ( $\ln RER_{t-i}$ ) significantly affects on 6 export products (precious stones, rubber, chemical products, electronic integrated circuits, iron and steel, and, air conditioning machine). The results also indicate that in most cases, the index of industrial production ( $\ln IIP_{t-i}$ ) is positive effects on 9 out of 10 export products except chemical products. On the other hand, for the long-run estimates in Table 4, the exchange rate volatility has a significant negative effect on the polymers of ethylene while, the impact of the IIP and the real exchange rate has a significant positive effect on automatic data processing machines at one and ten percent level of confidence, respectively.

## CONCLUSION, RECOMMENDATION, AND LIMITATION

From the empirical results, it can be concluded that the exchange rate volatility has a significant effect on manufactured exports both in the short and long term for China and Japan but it does not affect long-term exports for the United States. In China, exchange rate volatility has an influence on commodity exports of iron and steel, either in the short or long term, although in the opposite direction. Meanwhile, exports of polymers of ethylene to Japan face negative short and long-term exchange rate volatility. Therefore, from the overview of exports to the three main trading partners, it can be seen that in the short term, exchange rate volatility affects some industries positively and some negatively. But in the long term, most of the industry is able to adapt to the volatility that occurs, so it is less affected by the volatility in the exchange rate. For the affected industries, it was found that its affect exports in some industries increased and others decreased. This may be due to the individual specialty of each industry and because some industries have hedged against foreign exchange risk. For the others determinants of exports, most of the effects of the real exchange rate on exports are positive rather than negative in the long run. The positive results reflect the depreciation of the Thai Baht. If the Thai Baht depreciates, the price of Thai products will be cheaper in the view of trading partners, resulting in Thailand being able to export more. The index of industrial production that is used as a proxy for the income of the export destination countries has a positive effect on exports of several products both in the short and long term based on the assumption that higher income levels of the export destination country encourage larger exports. This study contributes to the existing literature in Thailand by investigating the effect of exchange rate volatility on the export value and also considers the other factors which can determine on export demand. It covers the top ten major products export in case of manufactured products to the three main trading partner countries. Therefore, if conducting studies at an industry level may increase our understanding about exchange rate movements as each product has its own risk and reduce the suffering from aggregation bias. Furthermore, it is useful for exporters in each industry can compare the impact of exchange rate volatility on export value to each trading partner country. According to the findings presented, policymakers should consider the effects of exchange rate volatility and the other variables include the real exchange rate and the industrial production index, as these variables affect exports in order to formulate partner-specific trade strategies and should disseminate more information about the increase in the income of trading partner countries, the demand of manufactured products of each country to exporters in order to plan production of export more efficiently. For the effected industries, policymakers should have measures to stimulate and encourage exporters to use a proper hedging tool e.g. forward and option to manage the risk of exchange rate and maintain their targeted export value, costs, and profitability. The study has limitations that need attention for future research. First, this study only studied the export sector without considering the import sector. Second, this study did not cover all categories of exports for example agricultural products or agro-industrial products. Finally, this study did not consider other variables that may affect exports such as social factors or political factors.

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# **AN EMPIRICAL STUDY OF THE IMPACT OF ECONOMIC DEVELOPMENT AND LOCATION ON TRANSNATIONALISM IN SOUTHERN THAILAND**

by

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## **ABSTRACT**

The southern region of Thailand is a major economic hub of agriculture, industry, trade, and tourism in the Thai Kingdom. These economic pillars bring the people of southern Thailand together with the people of Southeast Asia, creating a plethora of economic opportunities, as well as meaningful social, cultural, and interpersonal interactions. Collectively, these interactions have likely resulted in a familiarity between the people of southern Thailand and Southeast Asia, generating transnational attitudes in southern Thailand. In this study, the researcher looked specifically at the presence of transnational attitudes in the southern region of Thailand by answering the questions of what impact do both residing in southern Thailand and economic development have on transnational attitudes. The researcher used logistical regression to test hypotheses gauging transnational attitudes in southern Thailand and found that transnational attitudes are prominent in southern Thailand and economic development holds a perplexing relationship with transnational attitudes. The results have important implications for understanding transnational attitudes at the sub-national level in Thailand and potential opportunities for cooperation in Southeast Asia.

**KEY WORDS:** -

## INTRODUCTION

The causes and continuation of transnational attitudes and the impact of these attitudes on broad-based cross-national cooperation has puzzled social scientists for quite some time. Transnational attitudes can be defined as attitudes of respect and cooperation people have towards others that transcend the traditional country borders (Owen, 2018). In the 21st century, the people of the world are cooperating in meaningful ways that bring about not only greater development and prosperity, but also greater cultural understanding that propels the people and their respective countries towards further cross-national cooperation. Along the way, people are developing friendships and cultures of understanding that ultimately create an environment conducive to the formation and continuation of meaningful transnational attitudes.

Transnational attitudes are important in the modern globalized world. The modern world is defined by broad interaction between not only the governments around the world, but also between the people of the world. Individual level transnational attitudes are important for not only maintaining the status quo of regional and international cooperation, but also uncovering new pathways towards greater cooperation and integration on a regional level and beyond (Owen 2020). As already pointed out above, transnational attitudes harness important grassroot individual level cooperation. Moreover, in the modern world, regional organizations are emerging with institutional arrangements used to codify cooperation in broad-based trade arrangements and agreements. In order for these regional organizations to promote prosperity and achieve sustainability, support is required at not only the institutional structural government level, but also at the grassroot individual level (Risse, 2003). Transnational attitudes can therefore serve as the grassroot individual level adhesive that creates an environment conducive to the long-term promotion of prosperity and sustainable regional cooperation.

The European Union (EU) is an important institutional arrangement that bonds the countries of Europe together (EU Citizenship, n.d.; EU Pioneers, n.d.). The EU is important to modern European affairs; however, it is not clear as to whether a European identity is forming amongst the people of the EU. In a recent study, Risse (2003) noted that grassroots level transnationalism varied considerably from country to country—that is, from great enthusiasm for the EU in Italy to outright opposition in England. Furthermore, Petithomme (2008) concluded that the lack of transnational cohesion may explain rising broader grassroots resistance towards the EU. Without grassroot individual level support for the EU, one can hypothesize several pathways towards the erosion of the EU, thus compromising long-term regional sustainability. Perhaps the recent Brexit is an excellent example of such a codified regional institutional arrangement being threatened by the lack of grassroot individual level support. Given British opposition at important EU milestones, the lack of transnationalism amongst the British people should not come as a surprise (Risse, 2003). Transnational attitudes amongst the people of Europe can foster an environment of cooperation and mutual benefit for all parties, in addition to bringing sustainability to the EU as a regional institutional arrangement. Only time will tell whether or not these attitudes are prominent enough for a transnational European identity to form that can either co-exist with the national identities or perhaps even replace the national identities.

Transnational attitudes are not unique to Europe as these attitudes are already present across much of the globe. For instance, transnational attitudes are relatively high in all the countries in Southeast Asia, ranging from approximately 37 percent in Indonesia to just over 87 percent in Vietnam (Owen, 2018). Several of the Southeast Asian countries have populations where more than half share transnational attitudes, namely Cambodia, Laos, Philippines, Singapore, Thailand, and Vietnam (Owen, 2018). These higher levels of transnational attitudes bode well for the regional trade block, the Association of Southeast Asian Nations (ASEAN) (Albert and Maizland, 2019; Owen, 2018). ASEAN has the mission of creating a Southeast Asian region of prosperity and progress under the motto of “One Vision, One Identity, One Community” (ASEAN Motto, n.d.). Unlike the EU where all the countries share a similar political ideology, there is a great degree of political ideological diversity in Southeast Asia, which likely complicates legitimate attempts at cooperation; however, transnational attitudes are relatively high. This suggests that even though disagreements may occur at the institutional government level, cooperation still defines the grassroots individual level.

Thailand, known around the world as the Land of Smiles, is famous for warm welcoming smiles and hosting the people of the world with premiere tourist destinations (Chia, 2017). Thais are known as very compassionate and empathetic people, so it is not surprising that transnational attitudes are held by over 90 percent of the Thai population (Owen, 2019). Moreover, after decades of economic development, the Thai people have recently begun to spread their wings and take a more active role in international affairs above and beyond active participation in ASEAN. For instance, in 2017, Praya Lundberg, a very successful Thai actress and model, became Thailand’s first ever Goodwill Ambassador to the United Nations High Commissioner for Refugees (UNHCR). Praya’s transition to global humanitarian has been a unique opportunity for her to play a direct role in informing the Thai people of the issues plaguing the global population (Owen, 2018; Tantiwarodom, 2017). The Thai people seem more than eager to listen! With this said, even though it is clear transnational attitudes are prominent in Thailand, the causes are still somewhat elusive.

In this study, the researcher conducts a test of transnational attitudes in Thailand. The researcher seeks to answer the questions of what impact does residing in southern Thailand have on transnational attitudes and what impact does economic development have on transnational attitudes. On the one hand, the southern region of Thailand is of particular interest as transnational attitudes are extremely high, even though the southern region is far removed from Bangkok, the capital city. On the other hand, economic development matters to varying degrees when attempting to understand transnational attitudes in Thailand (Owen, 2020). Therefore, the researcher investigates the impact of both residing in southern Thailand and economic development on transnational attitudes. This study unfolds as follows. First, the researcher broadly discusses transnational attitudes in Thailand and Southeast Asia. Next, the researcher moves into a discussion of the hypothesis, data and method. Then, the researcher proceeds to the findings of this study. The findings indicate that while transnational attitudes are indeed prominent in southern Thailand, the relationship between economic development and transnational attitudes is a perplexing relationship. The researcher concludes with a discussion of the important implications of this study.

## TRANSNATIONAL ATTITUDES ACROSS THAILAND AND SOUTHEAST ASIA

While there is a plethora of studies on the differing dimensions of transnational attitudes across the EU member countries of Europe, the study of transnational attitudes in Southeast Asia is still in the formative stage. While transnational attitudes are present across Southeast Asia, the causes are less understood (Acharya 2017; Owen 2018). Perhaps the causes of transnationalism lie in shared Southeast Asian values or perhaps the explanation transcends shared values (Acharya 2017; Baba 2016; Owen 2018). Both Acharya (2017) and Baba (2016) made normative arguments that a sense of shared Southeast Asian values is embedded in cultural norms, individual orientation towards the state, modes of interaction, nationalism, religion, and regionalism. Owen (2021; 2020; 2019; 2018) conducted several empirical tests of potential explanations that have garnered empirical support elsewhere, shedding light on possible causes, though there is a significant degree of variation in the findings across Southeast Asia.

Across ASEAN, the percentage of Thais with transnational attitudes exceeded 90 percent, the highest of all the ASEAN founding member countries (see Table 1). Using the question of whether the respondent belongs to the Asian transnational group from two recent waves of the Asian Barometer public opinion survey, Owen (2019) concluded that while these attitudes were high amongst the Thai people, location and economic development had a confounding impact on overall transnational attitudes. Regarding one's location, residing in Bangkok and other urban areas around the kingdom actually decreased transnational attitudes in the first wave. However, in a subsequent wave just a few years later, the opposite was the case as residing in Bangkok and other urban centers actually increased transnational attitudes. Owen (2018) reported similar findings even when he expanded the statistical test to include three competing hypotheses—that is, economic development, contact with foreigners, and sentiments towards regional organizations as drivers of transnational attitudes. These findings were later confirmed again (Owen, 2020). The differences across the waves are stark and definitely a reason for pause, especially since the data collection periods were spaced out just a few years apart.

**TABLE 1.** Transnational Attitudes in ASEAN Founding Member Countries

|                         | <b>Indonesia</b> | <b>Malaysia</b> | <b>Philippines</b> | <b>Singapore</b> | <b>Thailand</b> |
|-------------------------|------------------|-----------------|--------------------|------------------|-----------------|
| Transnational Attitudes | 45.0%            | 76.8%           | 88.4%              | 83.8%            | 90.2%           |
| Have                    | 338              | 542             | 706                | 624              | 699             |
| Don't Have              | 413              | 164             | 93                 | 46               | 76              |
| Total                   | 751              | 706             | 799                | 745              | 775             |

Source: 2004 Asian Barometer.

On a similar vein, the relationship between economic development and transnationalism in Thailand is equally mystifying. While living standards decreased transnational attitudes in 2004, they had the opposite effect on transnational attitudes in 2007 (Owen, 2019). Interestingly enough, in the same

study, even though education and income were statistically insignificant, the coefficients for education and income in 2004 were negative while the coefficients for the same variables in 2007 were statistically insignificant and positive (Owen, 2019). In other words, if education and income were statistically significant, the findings would likely match the relationship between living standards and transnationalism across both waves. In a later study, however, Owen (2020) found that both education and living standards held statistically significant relationships with transnational attitudes in Thailand, though income was still statistically insignificant. In other words, both education and living standards mattered when attempting to understand the causes of transnational attitudes, though income did not matter.

**TABLE 2.** Transnational Attitudes and Economic Development Across Thailand

|                                | <b>Transnational<br/>Attitudes</b> | <b>Have</b> | <b>Don't<br/>Have</b> | <b>Total</b> |
|--------------------------------|------------------------------------|-------------|-----------------------|--------------|
| Above Average Living Standards | 85.1%                              | 40          | 7                     | 47           |
| Average Living Standards       | 90.1%                              | 557         | 61                    | 618          |
| University Degree or Higher    | 85.8%                              | 97          | 16                    | 113          |
| High School or Equivalent      | 93.8%                              | 76          | 5                     | 81           |
| 50,000 Baht or Greater Income  | 78.3%                              | 36          | 10                    | 46           |
| 25,000 to 49,999 Baht Income   | 91.8%                              | 78          | 7                     | 85           |

*Source:* 2004 Asian Barometer.

A possible explanation for the variation in economic development findings may actually lie in the survey data. For instance, transnational attitudes are more prominent in the middle than at the top of the socioeconomic spectrum. As indicated in Table 2, those with average living standards maintained greater transnational attitudes than those with above average living standards. It is the same case for those with a high school diploma versus those with a university degree as well as those with a mid-range income versus those who earn more than 50,000 baht. In each category—that is, education, income, and living standards—transnational attitudes of those in the mid-range exceeded 90 percent, whereas those in the high-range did not. This potentially curvilinear relationship between the measures of economic development and transnational attitudes may offer further needed insight into Thai transnational attitudes. However, it should be noted that when Owen (2018) tested three hypotheses—that is, economic development, contact with foreigners, and sentiments towards regional organizations as drivers of transnational attitudes—statistical support for the economic development measures disappeared completely.



**TABLE 3.** Transnational Attitudes Across the Regions of Thailand

|                         | <b>Bangkok</b> | <b>Central</b> | <b>North</b> | <b>Northeast</b> | <b>South</b> |
|-------------------------|----------------|----------------|--------------|------------------|--------------|
| Transnational Attitudes | 85.4%          | 98.0%          | 88.1%        | 88.7%            | 95.3%        |
| Have                    | 199            | 149            | 96           | 173              | 82           |
| Don't Have              | 34             | 3              | 13           | 22               | 4            |
| Total                   | 233            | 152            | 109          | 195              | 86           |

*Source:* 2004 Asian Barometer.

There is also significant variation in transnational attitudes across the regions of Thailand. Thailand possesses the capital city of Bangkok and four officially recognized regions: Central region, northern region, northeastern region, and the southern region. Bangkok resides in the central region of Thailand and this region possesses the highest concentration of Thais with transnational attitudes in the Thai Kingdom, followed closely by the southern region (see Table 3). Interestingly enough, transnational attitudes in Bangkok are the lowest in the dataset, but still over 85 percent. While central Thailand maintains slightly higher levels of transnational attitudes than southern Thailand, central Thailand has been the benefactor of industrial development and diversification due to its proximity to the capital city of Bangkok. Therefore, it is reasonable to conclude the high transnationalism in central Thailand is in part the product of the geographic lottery as it shares the region with Bangkok. Southern Thailand, on the other hand, has benefited much less from this geographic lottery as it is far removed from Bangkok. With that stated, over 95 percent of the population surveyed in southern Thailand identify as possessing transnational attitudes (see Table 3). Actually, transnational attitudes are quite high across the entire Thai Kingdom, though only in the central and southern regions of Thailand do transnational attitudes cross the 90 percent threshold.

**TABLE 4.** Economic Development Across the Regions of Thailand

|                                | <b>Bangkok</b> | <b>Central</b> | <b>North</b> | <b>Northeast</b> | <b>South</b> |
|--------------------------------|----------------|----------------|--------------|------------------|--------------|
| Above Average Living Standards | 19             | 7              | 4            | 12               | 6            |
| Average Living Standards       | 194            | 132            | 97           | 145              | 68           |
| University Degree or Higher    | 60             | 23             | 12           | 10               | 10           |
| High School or Equivalent      | 28             | 14             | 14           | 15               | 12           |
| 50,000 Baht or Greater Income  | 26             | 6              | 2            | 1                | 11           |
| 25,000 to 49,999 Baht Income   | 44             | 13             | 5            | 12               | 12           |
| Total Population               | 240            | 153            | 110          | 206              | 91           |

*Source:* 2004 Asian Barometer.

Southern Thailand has developed to become a major economic hub of agriculture, industry, trade, and tourism in the Thai Kingdom (Wangkiat, 2017). Southern Thailand is therefore a prominent region with a relatively high diversification of industry across its fourteen provinces: Chumphon, Krabi, Nakhon Sri Thammarat, Narathiwat, Pattani, Phang Nga, Phatthalung, Phuket, Ranong, Satun, Songkhla, Surat Thani, Trang, and Yala. The diversification of industry likely has some surprising advantages. For instance, even though one would expect the greater concentration of income

earners in the capital city, Bangkok, this is not the case. Southern Thailand actually has the greatest concentration of higher income earners at over 12 percent (11 of 91 southern Thais) of the southern Thai population (see Table 4). Bangkok does, however, possess a greater percentage of the population with above average living standards and university degrees at approximately 8 percent (19 of 240 Bangkokians) and 25 percent (60 of 240 Bangkokians) respectively. Even so, the living standards of southern Thais are only slightly lower than Bangkokians at just under 7 percent of the population (6 of 91 southern Thais), while those with university degrees in southern Thailand trailed both Bangkok and the central region. This is in a region that is far removed from the abundance of commerce opportunities that characterize Bangkok. In the end it is the independent nature of development in southern Thailand—that is, independent of close geographic proximity to Bangkok—coupled with high levels of transnational attitudes and the greater presence of high-income earners, that makes this region of particular interest to a study on Thai transnational attitudes.

It is also important to note that across the rest of the ASEAN founding member countries, transnational attitudes are also quite prominent. As stated in Table 1, the percentage of the overall populations with transnational attitudes range from 45 percent in Indonesia to over 88 percent in the Philippines, with Thailand clearly having a larger portion of the population with transnational attitudes at over 90 percent. While one's residence does not seem to be correlated with transnational attitudes across the other ASEAN founding member countries, the relationship between transnational attitudes and economic development varies considerably from country to country. Income and living conditions matter for transnational attitudes in Indonesia and Singapore, while education does not. However, in the Philippines, education and living conditions matter for transnational attitudes, but income does not. Finally, in Malaysia, only education seems to matter in that it depresses transnational attitudes (Owen, 2018). Indeed, a puzzling set of regional findings.

**TABLE 5.** Transnational Attitudes in ASEAN Non-founding Member Countries

|                         | <b>Brunei</b> | <b>Cambodia</b> | <b>Laos</b> | <b>Myanmar</b> | <b>Vietnam</b> |
|-------------------------|---------------|-----------------|-------------|----------------|----------------|
| Transnational Attitudes | 71.5%         | 99.3%           | 59.8%       | 81.5%          | 93.0%          |
| Have                    | 553           | 806             | 475         | 640            | 741            |
| Don't Have              | 221           | 6               | 319         | 145            | 56             |
| Total                   | 774           | 812             | 794         | 785            | 797            |

*Source:* 2004 Asian Barometer.

Transnational attitudes are also quite prominent in the ASEAN non-founding member countries. Table 5 shows that transnational attitudes are quite high in the ASEAN non-founding member countries and range from around 60 percent in Laos to 93 percent in Vietnam. Regarding one's residence as a driver of transnational attitudes, residing in the capital city of Vientiane mattered for Lao transnational attitudes, but did not matter in the other ASEAN non-founding member countries of Cambodia, Myanmar, and Vietnam (Owen, 2018)<sup>5</sup>. Moreover, Owen (2020) found no support for one's urban residence driving transnational attitudes in his follow-up study (Owen, 2020). This also includes Laos. Upon further investiga-

<sup>5</sup> Brunei was not included in this study as the necessary data was not available in the survey.

tion in Myanmar, however, Owen (2021) concluded that residing in Yangon and the central region increased transnational attitudes.

The relationship between economic development and transnational attitudes in the ASEAN non-founding member countries also offer some insight. While income provided insight into transnational attitudes in Cambodia, education and living conditions did not (Owen, 2018). None of the economic development variables—that is, education, income, and living standards—mattered in both Laos and Vietnam, while only living standards were statistically significant in Myanmar (Owen, 2018). In his follow-up study, Owen (2020) concluded that both education and income mattered in Cambodia, only education mattered in both Laos and Vietnam, while both education and living standards characterized transnational attitudes amongst the Myanmar people. Though in his follow-up study, Owen (2021) found that only living standards were statistically significant in Myanmar.

Overall, transnational attitudes seem to be quite prominent across Thailand and the entire region of Southeast Asia, though the causes differ significantly. Given the genuine caring nature of the Thai people, the high presence of transnational attitudes should not come as a surprise at all. There is likely a great desire amongst the Thai people to engage the people of the region and beyond in cooperative ways. Thailand engages in many economic activities that have improved the educational opportunities, lives, living standards, and wealth of so many Thais over the past few decades (Owen, 2020). This is the case in Bangkok and the surrounding central region of Thailand. With the diversity of industries in southern Thailand and high transnational attitudes, it is time to further investigate transnational attitudes in this region. Southern Thailand is a vibrant and diverse region of a truly vibrant and diverse country. In this study, the researcher looks specifically at transnational attitudes in southern Thailand with a goal of uncovering the causes.

## **HYPOTHESIS, DATA, AND METHOD**

Following the discussion above, the hypotheses below are derived and tested:

- H1: Residing in the southern region of Thailand increases transnational attitudes. Attitudes tend to vary depending on one's location, which oftentimes is the reflection of the available economic opportunities and social networks. Some areas offer greater access to economic and social activities, including access to lucrative careers and interactions with diverse groups of people, which can greatly impact transnational attitudes (Verba and Nie, 1972). Given the diversity of industries in southern Thailand, along with ample economic activity and access to foreign populations, both permanent and transient, one would expect to see more transnational attitudes as a result (Owen, 2019).
- H2: Economic development increases transnational attitudes. Individuals who are direct beneficiaries of economic development tend to have more prominent transnational attitudes (Owen, 2021). In other words, when individual education levels, income levels, and living standards improve as a result of economic development in an era of regionalization and globalization, transnational attitudes tend to define people. Improved educational opportunities, income earning potential, and overall standards of living provide many benefits, including, but not limited to, opportunities to further improve their indi-

vidual outcome. They also provide opportunities for greater access to different people of different worldviews. Given the economic strides made over the past few decades in Thailand, one would expect to see more transnational attitudes as a result (Owen, 2021; Owen, 2020; Owen, 2019; Owen, 2018).

To test these hypotheses, data are assembled from the 2004 wave of the Asian Barometer. The Asian Barometer is the best data source for this study for at least four important reasons. First, the data were collected decades after Thailand, along with Indonesia, Malaysia, Philippines, and Singapore, created the regional organization known as ASEAN, which has the role of bringing economic development and prosperity to the region. This goal was partially realized in the late 1990s after Brunei, Cambodia, Laos, Myanmar, and Vietnam joined and Southeast Asia had full regional membership in ASEAN (Owen, 2018). Next, the data were collected well after Thailand and the Thai people directly benefited from ASEAN membership. This is important because the longer the membership in ASEAN, the greater the likelihood of economic development mattering. Then, the Asian Barometer provided regional identifiers, which allowed the researcher to generate a regional identifier dummy variable for southern Thailand. Subsequently, this permitted the researcher to test the residence in southern Thailand hypothesis. Finally, this survey indicated that transnational attitudes exist in Thailand (Owen, 2019). Not only do they exist, but transnational attitudes are also quite prominent, allowing for a data-rich study. Logistical regression is the most appropriate regression technique as the dependent variable is a binary response variable (Owen, 2019). Logistical regression is used to obtain the odds ratios in a statistical examination of an association between independent and control variables and one dichotomous binary dependent variable.

### **Dependent Variable**

The dependent variable is from a single questionnaire item used to understand respondents' transnational attitudes. The Asian Barometer measures how people report their identity as part of a larger Asian identity that transcends national borders as they were asked whether they belong to the Asian transnational group. An Asian identity necessarily means an identity that transcends the Thai identity that suggests a connection to at least a regional level. The Asian transnational identity is measured in a binary manner as a dummy variable on a 2-point scale from no Asian transnational identity (coded as 0) to an Asian transnational identity (coded as 1)<sup>6</sup>. Even though measurement error is a concern in any study using survey data, there is no reason to believe any of these measures induced bias (Owen, 2019).

### **Independent Variables**

The primary research questions explore potential causes of transnational attitudes in Thailand. The first hypothesis proposes a relationship between location and transnational attitudes. More specifically, the first hypothesis posits a relationship between residing in the southern region of Thailand and transnational attitudes as residing in southern Thailand potentially increases transnational attitudes. Given southern Thailand is a major economic hub of agriculture, industry, trade, and tourism, the southern Thai people potentially get the exposure to out-

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<sup>6</sup> See Appendix A for the descriptive statistics of each variable in this study.

siders that subsequently leads to high levels of transnational attitudes (Wangkiat, 2017). Regional diversity in industry is therefore a crucial element of sustainable economic development that can create an environment that attracts individuals far and near, resulting in greater exposure to different individuals and ideas, possibly leading to increased transnational attitudes. This survey measures how people report their location of residence on a major public opinion survey by asking the respondents to state their current residence in one of the following five regions: Bangkok, central region, northern region, northeastern region, and southern region. The researcher subsequently created a residence in southern Thailand dummy variable on a 2-point scale from not residing in the southern Thailand (coded as 0) to residing in the southern Thailand (coded as 1).

The second hypothesis proposes a relationship between economic development and transnational attitudes. Economic development at the individual level is measured through a better standard of living for many (Owen, 2019). It is therefore reasonable to surmise that after decades of membership in ASEAN and economic engagement with neighboring countries, many Thais are in fact the beneficiaries of economic development through these arrangements. The Asian Barometer measures how people report their standard of living on a 5-point scale: Low standard of living is coded as 1; relatively low standard of living is coded as 2; average standard of living is coded as 3; relatively high standard of living is coded as 4; and high standard of living is coded as 5.

Economic development is also measured through increased education and income levels, two important aspects of an individual's socioeconomic status (SES) (Chen and Zhong 1999; Shi 2000; Zhong, Chen and Scheb 1998). Education tends to matter greatly as higher educated individuals tend to have greater access to knowledge, subject matter perspectives, and social networks that are necessary for upward mobility. Income also tends to matter as those with higher incomes tend to understand they have a greater stake in economic and political processes and the subsequent outcomes (Chen and Zhong, 1999; Owen, 2018; Shi, 2000; Zhong, Chen and Scheb, 1998). This survey measures how people report their education on a six-point scale from no formal education to a university degree. To capture the effect of the educational attitudinal differences, dummy variables are generated for three education groups: University degree holders; high school diploma holders or equivalent; and those with less than a high school diploma. Moreover, this survey measures how people report their income on a seventeen-point scale from less than 5,000 baht to greater than 60,000 baht. To capture the effect of the income level attitudinal differences, dummy variables are generated for three income group: earners of 50,000 baht or more; earners of 25,000 to 49,999 baht; and those who earn less than 25,000 baht.

### **Control Variables**

A few variables are related to individual attitudes and it is therefore important to control for them in this study. Oftentimes, attitudes towards economic, political, and social issues are usually differentiated along demographic lines—that is, attitudes differentiated along generational and gender lines (Chen and Zhong, 1999; Owen, 2018; Shi, 2000; Zhong and Kim, 2005; Zhong, Chen and Scheb, 1998). The demographic measures of age and gender may therefore possess some explanatory power when attempting to understand transnational attitudes in Thailand. Regarding the age measure, older individuals tend to have attitudes towards

economic, political, and social issues that differ significantly from younger individuals, resulting in a likely generational attitudinal divide. This survey measures how people report their age on a scale that reflects their age in years. The respondents in the Asian Barometer dataset range from 20 years to 59 years of age. To capture the effect of the generational attitudinal differences, dummy variables are generated for each generation: Twenties captures those from 20 to 29 years of age; thirties captures those from 30 to 39 years of age; forties captures those from 40 to 49 years of age; and fifties captures those from 50 to 59 years of age.

The other important demographic measure is gender. Gender tends to be important in social science research as females tend to have attitudes towards economic, political, and social issues that differ significantly from males, resulting in a likely gender attitudinal divide. Since the gender variable maintains a dichotomous outcome of female or male, the researcher follows social science norms and generates a dummy variable to capture the presence of one gender, female, for this analysis (Owen, 2021; Owen, 2020; Owen, 2019; Owen, 2018). This survey measures how people report their gender on a two-point scale from not being a female (coded as 0) to being a female (coded as 1).

## RESULTS

Table 6 presents the results of this analysis. Even though the results point to the importance of economic development as a driver of transnational attitudes, the findings are a bit contradictory. On the one hand, living standards tend to matter as living standards decrease the likelihood of possessing transnational attitudes by 0.634 times. Even though living standards are statistically significant, the negative sign on the living standards coefficient points in the opposite direction of the second hypothesis. Therefore, even though this finding is important to this study, it does not offer support for the second hypothesis. On the other hand, while neither of the socioeconomic measures offer statistical support for the economic development hypothesis, both have some degree of statistical support. For instance, possessing a university degree is statistically insignificant, though possessing a high school diploma or equivalent is statistically significant. Being a high school diploma holder or an equivalent increases the likelihood of possessing transnational attitudes by 2.855 times, indicating more of a curvilinear relationship with transnational attitudes. Regarding income, earning 50,000 baht or more actually decreases the likelihood of possessing transnational attitudes by 0.347 times while earning a mid-tier income of 25,000 to 49,000 baht is simply statistically insignificant. In other words, the transnational attitudes of the highly educated are statistically indistinguishable from those with a lower education while transnational attitudes of high-income earners are simply significantly lower than other income earning groups. These findings seem potentially contradictory especially when considering southern Thailand possesses the largest concentration of higher income earners and the high concentration of university degree holders—that is, 11 percent of the overall southern Thai population identifies as at least university degree holders, just behind Bangkok and the central region (see Table 4). However, it is important to remember recent events, history, as well as Thailand’s general location in Southeast Asia as the crossroads of East Asia and South Asia when interpreting these findings.

**TABLE 6.** Logistical Regression Output of Transnational Attitudes in Thailand

|                                            | <b>2004</b><br>(S.E.) | <b>Odds Ratio</b> |
|--------------------------------------------|-----------------------|-------------------|
| <i>Beneficiaries of Econ Dev</i>           |                       |                   |
| Living Standard                            | -0.455*<br>(0.235)    | 0.634             |
| <i>Education<sup>1</sup></i>               |                       |                   |
| University Degree                          | 0.075<br>(0.373)      | 1.078             |
| High School Diploma or Equivalent          | 1.049**<br>(0.423)    | 2.855             |
| <i>Income<sup>2</sup></i>                  |                       |                   |
| 50,000 Baht or Higher                      | -1.058**<br>(0.449)   | 0.347             |
| 25,000 to 49,999 Baht                      | 0.062<br>(0.452)      | 1.064             |
| Southern Thailand                          | 0.930*<br>(0.546)     | 2.536             |
| <i>Generational Age Groups<sup>3</sup></i> |                       |                   |
| Twenties                                   | -0.081<br>(0.355)     | 0.922             |
| Thirties                                   | -0.029<br>(0.350)     | 0.971             |
| Fifties                                    | -0.147<br>(0.357)     | 0.863             |
| Female                                     | -0.431<br>(0.269)     | 0.650             |
| Log Likelihood                             | -233.332              |                   |
| N                                          | 774                   |                   |

Source: 2004 Asian Barometer.

\* - .10 statistical significance level.

\*\* - .05 statistical significance level.

\*\*\* - .01 statistical significance level.

Note: None of the variance inflation factors are more than **1.65** points, so multicollinearity is not a problem.

1. The reference category for the education level groups is those with less than a high school diploma or equivalent.

2. The reference category for the income level groups is those with earnings of less than **25,000** baht.

3. The reference category for generational age groups is the forties.

There are a few plausible explanations for these economic development findings. For instance, recent events may matter considerably. The economic and political environments that characterized Thailand in the years just before the collection of data used in this analysis may matter a lot. Even though the Thaksin Shinawat administration was riddled with allegations of corruption, many Thais from across the kingdom, including the rural countryfolk, showed up to vote in the 2001 General Election. Not surprising, the country witnessed Thaksin's Thai Rak Thai political party gain enough votes to garner a win (Hawker, 2003; Owen, 2009). Once becoming prime minister, Thaksin went on to create several populist policies, such as the thirty-baht healthcare policy, that seemed to resonate well with his rural base of supporters (Hawker, 2003; NaRanong and NaRanong, 2006). Several have suggested that the living conditions of the rural population improved during the Thaksin years, though others wholeheartedly disagree (NaRanong and NaRanong, 2006). Since the rural population typically has lower education and income levels than their urban counterparts, this could possibly explain why decreased living conditions and simply earning a high school diploma matters, while higher incomes decrease transnational attitudes. In other words, the rural Thais may have transnational attitudes on par with their wealthier, more educated urban counterparts. It may therefore be the case that populist policies created an environment that encouraged those with lower SES to engage in activities on par with their higher SES counterparts that introduced them to the neighboring country populations, though further investigation is necessary.

Another equally plausible explanation for the economic development findings is related directly to the location and history of Thailand. Thailand is at the geographic epicenter of Southeast Asia sharing borders in all directions: Laos and Myanmar to the north; Cambodia and Laos to the east; Malaysia to the south; and Myanmar to the west. Thailand is the only country in Southeast Asia that has border neighbors on all sides, while still possessing ample access to ports and shipping lanes. While Thailand has had a history of conflict and cooperation with its neighbors over the centuries, modern times are defined more by cooperation than conflict. As evidence of cooperation, people of neighboring countries travel to and reside in the Thai Kingdom, providing many Thais the opportunity to engage and develop friendships with their neighbors. The ease of travel between Thailand and its bordering neighbors has only been amplified through cooperative arrangements developed through ASEAN (Albert and Maizland, 2019; Tourism Industry in Thailand, 2017). It is therefore equally plausible that Thailand's location in Southeast Asia coupled with a history of cooperation may account for these economic development findings.

Directly related to the location explanation is the regional finding. Those in the southern region of Thailand hold greater transnational attitudes than their counterparts across the Thai Kingdom as being from southern Thailand increases the likelihood of having transnational attitudes by over two and a half points. This is direct evidence in support of the first hypothesis. It would seem that the diversity of the region coupled with the large presence of non-Thais may actually drive transnational attitudes in southern Thailand. A look across the region demonstrates that it is not just those across the entire socioeconomic spectrum in southern Thailand that share these attitudes, but also across both the age spectrum and gender dichotomy. Across both of these control measures, transnational attitudes are statistically undifferentiated—that is, the old and young, along with males and females, tend to have similar transna-



tional attitudes. Interviews<sup>7</sup> conducted by the author in Nakhon Sri Thammarat province, the heart of southern Thailand, support these findings. Transnational attitudes were shared by subjects interviewed across various occupations from farmers and small business owners to politicians and police officers; and from artists and teachers to engineers. These subjects were male and female and covered the age, education, and income spectrums as they shared similar transnational attitudes.

While the hypothesis capturing residence in southern Thailand garnered significant statistical support, the beneficiaries of economic development hypothesis was rejected in this study. So how can these findings be comprehensively explained? It is clear that transnational attitudes are prominent in the southern region of Thailand; however, the demographic and socioeconomic divisions that are typically present in most attitudinal studies are virtually absent in this study. Therefore, it is reasonable to conclude that while location is important, transnational attitudes may actually be shared by a large portion of the southern Thai population that transcends the usual demographic and socioeconomic divisions necessitating a deeper probe into these attitudes in the southern region.

## IMPLICATIONS

The findings in this study are quite perplexing in that location matters, but not across the archetypical demographic and socioeconomic spectrums. One is conceivably left to wonder whether or not the vast diversity of the southern Thailand region is a prominent driver of transnational attitudes. Perhaps this is the case and perhaps this is where the Thai people should focus their attention for the time being. After all, the southern region of Thailand is a diverse region with a presence of several lucrative industries and ample opportunities for the people to interact with outsiders on a fairly frequent basis. Moreover, the thriving local tourism industry may drive, or perhaps even compel, almost routine daily interactions with foreign tourists that contribute greatly to the formation and perpetuation of prominent transnational attitudes in this region. Therefore, the regional diversity along with persistent interactions with foreigners may be important to understanding transnational attitudes in this region. As Thailand continues to build greater cross-border cooperation, transnational attitudes should continue to be impacted.

While it is clear transnational attitudes are present in the region, the rejection of the economic development hypothesis is quite puzzling, though not necessarily a problem. Normally economic development results in increased SES that encourages greater cross-border interaction as a driver of transnationalism, especially in the era of globalization. This, however, is clearly not the case. Nonetheless, the support on the socioeconomic measures of the economic development hypothesis should not necessarily be construed as a problem for Thailand. Perhaps the answer really does reside in the pleasant nature of the Thai people—that is, cultural attributes shared by all Thai people. The absence of support on the economic development hypothesis

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<sup>7</sup> Interviews were conducted in 2019 in Nakhon Sri Thammasat province. Human Subjects Committee approval received through the Millersville University of Pennsylvania Institutional Review Board (IRB) under IRB Protocol # 479026320.

may therefore be indirect support for the compassionate nature of the Thai people, which truly does transcend socioeconomics.

While this study makes a necessary contribution to the broader understanding of transnational attitudes in Thailand, more research is needed. More research is also needed to understand transnational attitudes across Southeast Asia as the region seems to be committed to a sustainable ASEAN community. Therefore, it is important to understand whether or not the support for ASEAN witnessed at the institutional government level is also present at the grassroots individual level. If so, that bodes well for ASEAN in the long run; if not, then that is potentially problematic for ASEAN. The world just witnessed Britain's exit from the EU after a referendum vote by the British people on continuing membership in the EU. For decades the world has seen broad support amongst the governments of the European countries for the EU; however, not much attention was paid to support for the EU at the grassroots individual level across the countries of Europe until Britain asked the British people through the referendum. Many were shocked to see the broad support enjoyed by the EU at the institutional government level was not as prominent at the grassroots individual level in England. On the one hand, perhaps the British EU referendum vote is evidence that the grassroots individual level support for the EU just may not be as strong as the institutional support seen at the institutional government level. On the other hand, perhaps the British EU referendum vote is evidence of a disconnect between the governments of the EU member countries and their respective populations. Either way, this is problematic for the long-term viability of the EU.

Will ASEAN continue as an institution that promotes cooperation and prosperity across Southeast Asia and beyond? This is a complicated question to answer. In order for a regional organization such as ASEAN to thrive and makes strides towards greater regional cooperation and integration, support must be maintained at both the institutional government level and at the grassroots individual level. Therefore, a greater understanding of interconnectedness of the people across Southeast Asia is necessary not only to comprehending the prospects of cooperation across the region, but also to realizing the potential long-term viability of ASEAN. This study on southern Thailand offers a glimpse at this interconnectedness, though more research is needed across the Southeast Asian region.

While transnational attitudes are present in southern Thailand, this study demonstrates the complexity in studying transnationalism at the subnational level. However, the fact remains that transnational attitudes are quite prominent in southern Thailand—over 95 percent of the population as indicated in Table 2. This finding is possibly quite promising not only for the southern region and the Thai Kingdom, but also for the entire region of Southeast Asia. With ASEAN leading the regional charge towards greater cooperation and integration, the southern region of Thailand may be a necessary beacon of transnational hope. Perhaps a deeper look at the grassroots individual level attitudes, perceptions, and experiences would further enrich the literature on transnational attitudes in the region.

## **ACKNOWLEDGEMENTS**

Data analyzed in this article were collected by the Asian Barometer Project (2004–2008), which was co-directed by Profs. Fu Hu and Yun-han Chu and received major funding support from Taiwan's Ministry of Education, Academia Sinica and National Taiwan University. The Asian Barometer Project Office ([www.asianbarometer.org](http://www.asianbarometer.org)) is solely responsible for the data distribution.

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## APPENDIX A

### Descriptive Statistics

| Variable                             | Mean  | Std Devia-<br>tion | Minimum | Maximum | Observations |
|--------------------------------------|-------|--------------------|---------|---------|--------------|
| Transnational Attitudes              | 0.902 | 0.298              | 0       | 1       | 775          |
| Southern Thailand                    | 0.114 | 0.318              | 0       | 1       | 800          |
| Living Standards                     | 2.891 | 0.570              | 1       | 5       | 800          |
| University Degree                    | 0.144 | 0.351              | 0       | 1       | 800          |
| High School Diploma or<br>Equivalent | 0.233 | 0.425              | 0       | 1       | 800          |
| 50,000 Baht or Higher                | 0.058 | 0.233              | 0       | 1       | 799          |
| 25,000 to 49,999 Baht                | 0.108 | 0.310              | 0       | 1       | 799          |
| Twenties                             | 0.290 | 0.454              | 0       | 1       | 800          |
| Thirties                             | 0.250 | 0.433              | 0       | 1       | 800          |
| Forties                              | 0.273 | 0.433              | 0       | 1       | 800          |
| Fifties                              | 0.188 | 0.391              | 0       | 1       | 800          |
| Female                               | 0.609 | 0.488              | 0       | 1       | 800          |

**BUSINESS SKILLS AND PRACTICES OF AMBULANT ENTREPRENEURS  
IN THE CASE OF A SEMI-COMMERCIALIZED COMMUNITY  
IN NORTHERN PHILIPPINES**

by

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**ABSTRACT**

Entrepreneurship or locally termed as “business” is great deal for many Filipinos as most of them particularly address themselves- “may sariling negosyo”. Entrepreneurship in the country is associated with freedom, however at risk for challenges of a highly competitive market, lack of capital, credit, other resources, support and business fundamentals. Thus, this study was guided in measuring the overall condition of the ambulant-micro business entrepreneurs of Bayombong, Nueva Vizcaya, their personal and financial management practices; business skills, behaviors and attitudes by using descriptive-correlational approach as to elicit the relationships of the selected business constructs. An adopted questionnaire checklist was used to gather pertinent data from the 60 purposively selected respondents. The study had significantly showed that majority are married females and street food vendors. Males suggested higher incidence of performing for the business skills and practices set indicators.

**KEY WORDS:** Ambulant-Micro Business, Ambulant Vendors,  
Sources and Amount of Finances, Business Skills and Practices

## INTRODUCTION

Entrepreneurship is a big word for many Filipinos. A more commonly used word is “business” or as most Filipinos would say it “may sariling negosyo”. The people that are referred to as “small businessmen” are sari-sari store owners, ‘Jeepney’ and tricycle drivers, market vendors, banana cue and squid ball stall owners. (Reyes, 2009; Julian et al, 2015)

Filipinos would associate being an entrepreneur with freedom, though comes with many risks. Many small entrepreneurs face the challenges of a highly competitive market with lack of capital, resorting to credit and other resources, lack of support and business know how. Does this stop many small businessmen from going about their trade?

Survival is a mere consolation or income-reliance to provide basic necessities. A study conducted by the Department of Trade and Industry showed that 99.7% of businesses in the country are micro, small and medium enterprises (De Leon, 2010).

These people provide many services and benefits that the rest of their countrymen take for granted. ‘Jeepney’ and tricycle drivers make transportation more affordable to those without cars, while sari-sari store owners make basic goods more accessible and affordable in many neighborhoods. Another major benefit that micro-entrepreneurs provide is employment to those who would otherwise not be employed in larger companies because of their lack of qualifications.

As a developing country, the Philippines has large informal sector as comprised of micro-enterprises. Many of these are severely resource-constrained small-scaled retailers or neighborhood store owners, market vendors and many other including night time workers in karaoke bars, whose survival in the business relies heavily on access to financing. Financing for these micro entrepreneurs usually comes from lending sector in the form of financiers, called “5-6” lending business. This study will give central attention to the practices, performance and problems encountered by this ambulant micro business sector.

Nowadays, the ambulant micro business sector has made a big name in terms of their contribution to the business economy of the country. Despite of their hard works it remains questionable on how they survive on to their business and how they managed their finances to remain competitive in the world of business. These are the factors that gave ideas to the researcher to make a study about the practices, performance and problems encountered by ambulant micro business entrepreneur.

As seen by the researchers, street vending is relatively a solution to the economic difficulty not only by several marginalized Filipinos- an unorganized or informal schemes in terms of economy. Severely, it has been witnessed in the Municipality of Bayombong, Nueva Vizcaya that capitalization to huge businesses is a challenge as it runs out as refuge of unemployed individuals and questions appear on how they behave regarding financial management and income- which include those who are selling *banana/ camote cue, fishballs, kikiams, lumpia, turon, squid balls, kwek-kwek, salad, pansit, and the like*.



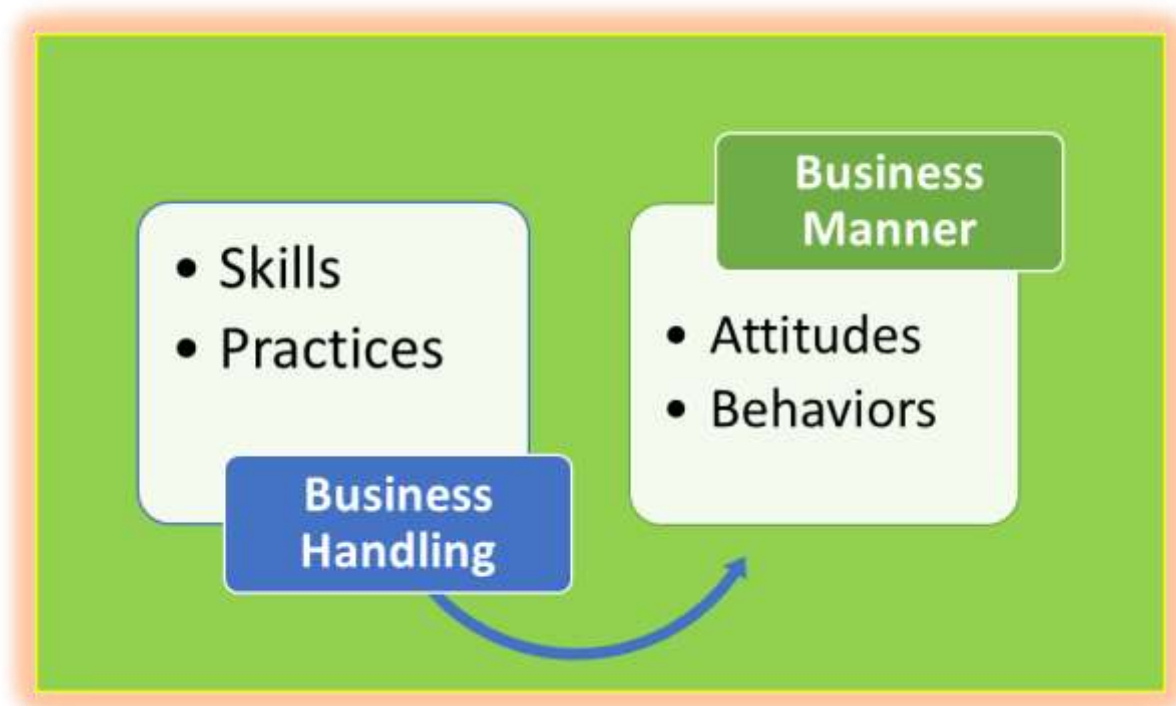
With the above justifications, this study was designed primarily to determine marketing strategies, behaviors among the emerging macro-financing businesses in the municipality; to detect some factors that contribute and/or motivate small-time entrepreneurs; and to identify some problems there might be in their day-to-day business activities.

## FRAMEWORK

Steven (2006) offered description of micro-marketing which is referred to the activities performed by the individual providers of goods and services within a macro-marketing system. Such organizations or businesses use various marketing techniques to accomplish objectives related to profits, market share, cash flow, and other economic factors that can enhance their wellbeing and position in the marketplace. The micro-marketing function within an entity is commonly referred to as marketing management. Marketing managers strive to get their organizations to anticipate and accurately determine the needs and wants of customer groups. Afterward they seek to respond effectively with a flow of need-satisfying goods and services. They are typically charged with planning, implementing, and then measuring the effectiveness of all marketing activities.

The conduct of this research was anchored on the subsequent paradigm.

**FIGURE 1:** Research Paradigm



## **OBJECTIVES OF THE STUDY**

This study intended at evaluating the ambulant-micro business entrepreneurs in Bayombong, Nueva Vizcaya in terms of business skills and practices and business attitudes and behaviors; and guided on identifying some factors and problems encountered in the conduct of their business activities.

Specifically, this study used scientific investigation on the following problems:

1. How are the respondents can be classified in terms of their (a) business skills and practices; and (b) business attitudes and behaviors?
2. Do the respondents' business skills and practices relate significantly with their business attitudes and behaviors?

## **METHODOLOGY**

The study had used descriptive-survey method of research. The main research-instrument was questionnaire, designed to elicit information on the profile of the respondents' overall business status. Descriptive research is purposely to give qualitative explain explanation on research variables. In this study, the aforementioned respondents' profiles were explained using descriptive statistics. Hence, components in evaluating ambulant-micro business entrepreneurs were also qualitatively discussed.

The study considered Bayombong, center town of the province of Nueva Vizcaya, as the main research-setting since it is regarded to have the biggest agricultural land and said to be a melting pot of several ethnic groups – which is dominated by the Ilocanos, some Tagalogs, Gaddangs, Ifugaos and other tribal groups that reside in the its 15 Barangays.

Under several administrations, Bayombong has kept its municipal market at Barangay Don Domingo Madella and maintained a strategic schedule for its market days as Monday-Wednesday-Friday where products and goods from highlands converge in the said pot for buy-and-selling purposes.

In early 2000, when the former Mayor Hon. Atty. John Severino Bagasao regain its post from the late Hon. Mayor Elpidio Dulay, his come-back was highlighted by the construction of a “Talipapa” or “Night Market” – just in front of the Municipal Hall and adjacent the St. Dominic Church in Dumlao Blvd. (now also called ay Bay-Walk).

Although may had misunderstood to be an act of offsetting the efforts of the previous administration, since it was then that the public market in Don Domingo Madella was fully refurbished – however, in one way or the other both has given opportunities small vendors – which until now are enjoying roaming around in selling their own products/goods.

One of the basic instruments is to elicit data gathering, the profile of the respondents, number two is the level of implementation of the code of ethics; and number three is the level of effectiveness of the code of ethics implementation and number four is to elicit the data about the degree of seriousness of problems in the code of ethics implementation by the police of Bayombong, Nueva Vizcaya. All of which were observed during the conduct of the study.

The respondents of the study were purposively chosen, which totaled to 60 small-scaled vendors around the town, most of them are men (39 males and 21 females). Interview was also done at the time the researchers visit the place. This had supplemented the instrument in gathering the data.

These ambulant vendors were those that were seen near school and campus parameters (sidewalks), those that were spotted at the public market, and some from those who were located in the Night Market (Talipapa), and other nearby locations in the poblacion. Each respondent was asked and requested to give their insights on their type of business based on the components included in the questionnaire-checklist. There are more married, female, and married female respondents. The average age of the respondents is 33.75, slightly higher in female than males. The mean number respondents' family member is 5.81 or 5 to 6 people. Majority of the respondents are college graduates, and most of them are street food vendors.

In order to collect pertinent information regarding the main components being evaluated among the ambulant-micro business entrepreneurs, a survey-questionnaire was formulated by the researchers which was primarily drafted from the related literatures and studies included in the background and framework of the study.

The questionnaire-checklist was subdivided into two (2) parts: (a) Part 1 – which included the information on respondents' profile variables, (b) Part 2 – was focused on the components for the Ambulant-Business Practices, Sources and Problems. Part two of the questionnaire was further categorized into five (5) subparts, which were considered in this study as the components to describe the marketing conditions of the ambulant vendors. The following were the said subparts: sources and amount of funds; business skills and practices; business attitude and behaviors; factors affecting the business; and problems encountered.

Each component in the second part of the survey-questionnaire was given specific item-determinants as to give clear explanations for the said concepts. A letter head was included asking approval from the target respondents in gathering data. Moreover, each question/item included in the said questionnaire was properly translated in Filipino for better understanding among the respondents and thus bringing more accurate and complete information.

After deciding on which components to be included in evaluating the ambulant-micro business, the researchers through the aid of their research adviser/instructor have formulated a survey-questionnaire, which was checked carefully by the latter and was approved by the research director.

Letters of approval were also made along with the said survey-questionnaire, which were duly noted by the adviser/instructor and/or research director. Floating of questionnaires was scheduled by the student-researchers based on the common vacant time. The questionnaires were

given to selected respondents who were given further instructions based on the main purpose of the study.

The questionnaires were immediately collected just after every respondent was done answering it with the promise to treat collected data based on the ethical principles of research. Supplemental interviews were also made as to verify data given by the respondents. Each answered survey-questionnaire was decoded and properly tallied for tabular presentation, discussion and analysis.

For each of the selected demographic-profile of the respondents, frequency, percentage and mean computations were used to discuss each qualitative finding. Also, the same statistical tools were used in eliciting the information on the evaluated components of the ambulant-micro business.

For measurement of the interrelationships between and among the identified components of ambulant-micro business, Pearson – r Correlation Coefficient and test for Regression were considered as the best statistical treatments for the said purpose.

## RESULTS AND DISCUSSIONS

### A.Business Skills and Practices

There are several areas that included in evaluating the skills and practices of the respondents of handling their ambulant business. One of which is vitally discussed in table 5, showing information on the respondents' strategic use of time and several styles to maintain their business.

**TABLE 1.** Respondents' Business Skills and Practices along Time and Styles (Scheduled Time, Using Ledger, and Making Inventory) in terms of Sex.

| Sex                                                   | Male |       | Female |       | Total |        |
|-------------------------------------------------------|------|-------|--------|-------|-------|--------|
| Indicators                                            | F    | %     | F      | %     | F     | %      |
| <i>A.Scheduled/Planned Time (Opening and Closing)</i> |      |       |        |       |       |        |
| Yes                                                   | 10   | 16.67 | 9      | 15.00 | 19    | 31.67  |
| No                                                    | 11   | 18.33 | 30     | 50.00 | 41    | 68.33  |
| Total                                                 | 21   | 35.00 | 39     | 65.00 | 60    | 100.00 |
| <i>B.Using Ledger/Notebook</i>                        |      |       |        |       |       |        |
| Yes                                                   | 16   | 26.67 | 27     | 45.00 | 43    | 71.67  |
| No                                                    | 5    | 8.33  | 12     | 20.00 | 17    | 28.83  |
| Total                                                 | 21   | 35.00 | 39     | 65.00 | 60    | 100.00 |
| <i>C.Making Inventory</i>                             |      |       |        |       |       |        |
| Yes                                                   | 13   | 21.67 | 27     | 45.00 | 40    | 66.67  |
| No                                                    | 8    | 13.33 | 12     | 20.00 | 20    | 33.33  |
| Total                                                 | 21   | 35.00 | 39     | 65.00 | 60    | 100.00 |

With regards to the time and styles used by the ambulant vendors as describe their business skills and practices along with the indicators of: (a) following scheduled/planned time in opening and closing the business in a day, (b) using a ledger/notebook to record sales, and (c) making inventories before and during closing of the business in a day; table 10 summarizes the quantitative data based on the responses of the respondents.

For scheduled and/or planned time for both opening and closing the respondents' ambulant business, majority of them do not follow patterns in terms of time allotment in opening and closing sessions which counted to 41 (68.83%) where 30 are females and 11 male respondents. This means that ambulant business as displayed by the target respondents do not necessarily be religious in terms of scheduled time for business activities. In summary, 76.92% of the total female respondents do not favor the idea of having a scheduled time in opening/closing their business.

Meanwhile, 71.67% of the total respondents are using ledger or notebook in noting the details of their daily sales – this includes 16 males and 27 females. Within the female population, 69.23% of them do use notebooks in recording sales, which is considerably lower as to the percentage of the males within their population, computed as 76.19%. This implies that male ambulant vendors are more vivid in terms of documenting their daily sales compared to the females.

For developing daily inventories before and during closing period of the ambulant business, an overall total of 40 (67.67%) respondents agreed on the said purpose comprising of 27 females and 13 males. This time, males showed lower sense of valuing such activity in their business scaled the total percentage of 61.91% from the male population compared to the females of 69.23% within their population.

Next component of the respondents' business skills and practices is significantly discussed in table 2 – focusing on the indicators: (d) computing daily profit over the daily expenses, (e) listing items before purchasing things/products/goods needed in the business, and (f) saving amount to maintain the business.

**TABLE 2.** Respondents' Business Skills and Practices along Time and Styles (Computing Daily Profit, Listing Items, and Savings) in terms of Sex

| <b>Sex</b>                      | <b>Male</b> |              | <b>Female</b> |              | <b>Total</b> |               |
|---------------------------------|-------------|--------------|---------------|--------------|--------------|---------------|
| Indicators                      | F           | %            | F             | %            | F            | %             |
| <i>A.Computing Daily Profit</i> |             |              |               |              |              |               |
| Yes                             | 14          | 23.33        | 28            | 46.67        | 42           | 70.00         |
| No                              | 7           | 11.67        | 11            | 18.33        | 18           | 30.00         |
| <i>Total</i>                    | <i>21</i>   | <i>35.00</i> | <i>39</i>     | <i>65.00</i> | <i>60</i>    | <i>100.00</i> |
| <i>B.Listing Items</i>          |             |              |               |              |              |               |
| Yes                             | 17          | 28.33        | 26            | 43.33        | 43           | 71.67         |
| No                              | 4           | 6.67         | 13            | 21.67        | 17           | 28.33         |
| <i>Total</i>                    | <i>21</i>   | <i>35.00</i> | <i>39</i>     | <i>65.00</i> | <i>60</i>    | <i>100.00</i> |
| <i>C.Savings</i>                |             |              |               |              |              |               |
| Yes                             | 9           | 15.00        | 10            | 16.67        | 19           | 31.67         |
| No                              | 12          | 20.00        | 29            | 48.33        | 41           | 68.33         |
| <i>Total</i>                    | <i>21</i>   | <i>35.00</i> | <i>39</i>     | <i>65.00</i> | <i>60</i>    | <i>100.00</i> |

As a business style of computing daily profit, table 2 manifests that 70% of the overall respondents are performing the said style. This encompasses 28 females and 14 males. Within each sex population, females computed a higher percentage proportion of 71.80% over the males of 66.67%.

On the other hand, there are about 71.67% of the total respondents that make daily lists of items to be purchased for their ambulant business. The figure includes 26 females and 17 males. Apparently, males have higher percentage proportion of 80.95% within their total frequency as compared to the females that computed only for 66.67% with their own population. This could mean that males have greater number of things/products/goods being sold in their ambulant business.

Last indicator is focused on the daily saving each ambulant vendor would had practicing as a business style purposely to maintain their source of livelihood-income. For this, there are only 19 respondents that save some amount (using bank account or not). This comprises 10 females and 9 males, which gave greater percentage proportion among the males computed as 42.86% (with the male population) than 25.64% within the population of the female respondents. Conversely, 41 (29 females, 12 males) of the respondents are not saving. This showed 74.36% percentage proportion within the female numbers and 57.14% for within male population. This means then that males considerably have higher sense of maintain the business through practicing daily savings.

**TABLE 3.** Respondents' Business Skills and Practices along Frequency in Purchasing and Selling, and Usual Location of the Business in terms of Sex

| <b>Sex</b>                               | <b>Male</b> |          | <b>Female</b> |          | <b>Total</b> |          |
|------------------------------------------|-------------|----------|---------------|----------|--------------|----------|
| <b>Variables</b>                         | <b>F</b>    | <b>%</b> | <b>F</b>      | <b>%</b> | <b>F</b>     | <b>%</b> |
| <i>A. Frequency in Purchasing</i>        |             |          |               |          |              |          |
| <i>Daily</i>                             | 11          | 18.33    | 8             | 13.33    | 19           | 31.67    |
| <i>Twice a Week</i>                      | 3           | 5.00     | 17            | 28.33    | 20           | 33.33    |
| <i>Weekly</i>                            | 3           | 5.00     | 11            | 18.33    | 14           | 23.33    |
| <i>Twice a Month</i>                     | 4           | 6.67     | 3             | 5.00     | 7            | 11.67    |
| <i>Total</i>                             | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |
| <i>B. Frequency in Selling</i>           |             |          |               |          |              |          |
| <i>Daily</i>                             | 7           | 11.67    | 12            | 20.00    | 19           | 31.67    |
| <i>Twice a Week</i>                      | 8           | 13.33    | 18            | 30.00    | 26           | 43.33    |
| <i>Weekly</i>                            | 4           | 6.67     | 6             | 10.00    | 10           | 16.67    |
| <i>Twice a Month</i>                     | 2           | 3.33     | 3             | 5.00     | 5            | 8.33     |
| <i>Total</i>                             | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |
| <i>C. Usual Location of the Business</i> |             |          |               |          |              |          |
| <i>Market</i>                            | 3           | 5.00     | 12            | 20.00    | 15           | 25.00    |
| <i>In front/Near the Church</i>          | 13          | 21.67    | 19            | 31.67    | 32           | 53.33    |
| <i>In front/Near the School</i>          | 1           | 1.67     | 6             | 10.00    | 7            | 11.67    |
| <i>House to House</i>                    | 6           | 10.00    | 2             | 3.33     | 8            | 13.33    |
| <i>Total</i>                             | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |

As gleaned in table 3, in terms of the respondents' frequency of purchasing things, products and/or goods for their ambulant business, majority of the respondents are doing it twice a week having the frequency of 20 (17 females, 3 males). In terms of the frequency of selling, majority of the respondents are doing it twice in a week with the total of 26 (18 females and 8 males).

Ambulant business may or may not have a permanent business location for almost ambulant vendors, who do not pay rental for the said purpose. Upon evaluation on the usual location of the business, table 3 shows that there are 32 counts of respondents (19 females, 13 males) can be located in front/near the church premises; a total of 15 vendors (12 females, 3 males) usually be found in the market; 8 other respondents (2 females, 6 males) would rather do house to house for their ambulant business; and 7 of the respondents (6 females and 1 males) sell in front/near the school areas.

Connecting the information derived in table 3, Tracy in 2004 had postulated in an article the different elements of a company's marketing mix, which can be divided into four basic decision areas—known as the "four Ps": product, place, promotion, and price—which marketing managers can use to devise an overall marketing strategy for a product or group of goods. These four decision groups represent all of the variables that a company can control. Although

not necessarily part of the main components of the ongoing study, the 4 P's identified by Thomas Watson Jr. can deem play equal functions with the enumerated indicators for the financial aspect of the ambulant business, business skills and practices, and business attitudes and behaviours.

Still valuable to the ongoing study, Coleman in 2013 has regarded considerations about place, which actually getting the good or service to the target market at the right time and in the proper quantity. Strategies related to place may utilize middlemen and facilitators with expertise in joining buyers and sellers, and they may also encompass various distribution channels, including retail, wholesale, catalogue, and others. Although it is not evidently pertaining to the ongoing study's variable on the usual location of the ambulant vendors, Coleman's discussion could also vindicate the importance of selecting the said variable in assessing the overall condition of the ambulant business, benchmarking on those that he pointed out on market's place.

## **B.Business Attitudes and Behaviors**

The study had also included components of ambulant vendors' business attitudes and behaviours which quantitative data are shown in table 4.

**TABLE 4.** Respondents' Business Attitudes and Behaviours along Motivation and Characteristics in terms of Sex

| <b>Sex</b>                            | <b>Male</b> |          | <b>Female</b> |          | <b>Total</b> |          |
|---------------------------------------|-------------|----------|---------------|----------|--------------|----------|
| <b>Indicators</b>                     | <b>F</b>    | <b>%</b> | <b>F</b>      | <b>%</b> | <b>F</b>     | <b>%</b> |
| <i>A.Motivation</i>                   |             |          |               |          |              |          |
| <i>Profit</i>                         | 15          | 25.00    | 32            | 53.33    | 47           | 78.33    |
| <i>Customer</i>                       | 6           | 10.00    | 7             | 11.67    | 13           | 21.67    |
| <i>Total</i>                          | 21          | 35.00    | 39            | 65.00    | 60           | 100.00   |
| <i>B.Characteristics</i>              |             |          |               |          |              |          |
| <i>Patience</i>                       | 18          | 30.00    | 26            | 43.33    | 44           | 73.33    |
| <i>Hardworking</i>                    | 18          | 30.00    | 34            | 56.67    | 52           | 86.67    |
| <i>Perseverance</i>                   | 11          | 18.33    | 10            | 16.67    | 21           | 35.00    |
| <i>Strong Body</i>                    | 4           | 6.67     | 16            | 23.88    | 20           | 33.33    |
| <i>Humble</i>                         | 6           | 10.00    | 19            | 31.67    | 25           | 41.67    |
| <i>Assertive</i>                      | 7           | 11.67    | 10            | 16.67    | 17           | 25.37    |
| <i>Persuasive</i>                     | 3           | 5.00     | 13            | 21.67    | 16           | 23.88    |
| <i>Good Oral Communication Skills</i> | 11          | 18.33    | 27            | 45.00    | 38           | 63.33    |
| <i>Sense of Humor</i>                 | 9           | 15.00    | 9             | 9.00     | 18           | 30.00    |
| <i>Business Knowledge</i>             | 1           | 1.67     | 8             | 13.33    | 9            | 15.00    |

As illustrated in table 4, there are 78.33 of the total respondents (32 females, 15 males) that are more motivated in terms of the profit that they can gain in their ambulant business than being motivated because of their customers. Viewing it within each females' and males' pop-



ulation, 71.42% of males and 82.05% of females are more profit-oriented than customer satisfaction.

Meanwhile, among the enumerated characteristics that should display by an ambulant vendor, hardworking slated the highest frequency of 52 (34 females, 18 males); a total of 44 respondents (26 females, 18 males) believe that patience should be one of the features of an ambulant vendor; having good oral communication scored 38 respondents (27 females, 11 males); 25 of the respondents (19 females, 6 males) considered being humble; 21 respondents (10 females, 11 males) agreed for perseverance; 20 respondents (16 females, 4 males) included a strong body; having a good sense of humor counted to 18 respondents (9 females, 9 males); 17 respondents voted for being assertive (10 females, 7 males); 16 of the respondents included persuasive attributes (13 females, 3 males); and 9 other respondents believe that an ambulant vendor should be knowledgeable on the business (8 females, 1 male).

In association to the indicators presented in table 14, N. Senior (2013) reported that decisions about promotion are focused related to sales, advertising, public relations, and other activities that communicate information intended to influence consumer behavior. Another related concept was presented by E. Jerome McCarthy and William D. Perreault, Jr. in 2005; wherein they have identified eight universal macro-marketing functions that make up the economic process: 1) buying, which refers to consumers seeking and evaluating goods and services; 2) selling, which involves promoting the offering; 3) transporting, which refers to the movement of goods from one place to another; 4) storing, which involves holding goods until customers need them; 5) standardization and grading, which entails sorting products according to size and quality; 6) financing, which delivers the cash and credit needed to perform the first five functions; 7) risk taking, which involves bearing the uncertainties that are part of the marketing process; and 8) market information, which refers to the gathering, analysis, and distribution of the data necessary to execute these marketing functions.

Although do not suggestively identified as equal with the indicators presented in table 14, those marketing functions enumerated by McCarthy and Perreault – could be in one way or the other be associated to the study's indicators for ambulant business attitude and behaviors, which could be essential in acting out the said marketing functions.

### **C.Relationship between Respondents' Business Skills and Practices and their Business Attitudes and Behaviors**

**TABLE 5.** Summary on the Relationship of Respondents' Business Skills and Practices and Business Attitudes and Behaviors

| <b>Variables being correlated</b>                                        | <b><i>r-value</i></b> | <b><i>p-value</i></b> | <b><i>Decision</i></b> |
|--------------------------------------------------------------------------|-----------------------|-----------------------|------------------------|
| Business Skills and Practices versus<br>Business Attitudes and Behaviors | 0.3026                | 0.0218                | Significant            |

As shown in table 5, a significant relationship is shown between the respondents' skills and practices in managing their business and their business manners in general. This is being intensified with the computed *r-value* of 0.3026 with the *p-value* of 0.0218, which is lesser than the significance level of 0.05. Thus, the assumption of the null hypothesis is negated on this context.

The study would suggest that respondents' way of handling their ambulant business would affect how they display their business manners, or vice versa.

Elucidating the said finding shown in table 5, Lepoutre (2012) suggested that decisions about product, place, promotion, and price will be dictated by the competitive stance that a firm assumes in its target market. According to Michael Porter's classic book *Competitive Strategy*, the three most common competitive strategies are low-cost supplier, differentiation, and niche. Companies that adopt a low-cost supplier strategy are usually characterized by a vigorous pursuit of efficiency and cost controls. A company that manufactures a low-tech or commodity product, such as wood panelling, would likely adopt this approach. Although Lepoutre's concept is focused more among companies, some of the business processes he had highlighted would be associate to any of the respondents' business skills and practices and business attitudes and behaviours.

## CONCLUSIONS

Based on the significant findings of the study, the following are essentially suggested by the researchers.

1. Majority of the respondents do not follow specific time for opening and closing their daily business operations and do not save some amount from their daily profit. Although most of them perform other indicators installed for business skills and practices. Males showed higher percentage proportion for the indicators: having ledger/notebook for daily inventory, computing profit, listing items for purchase, saving amount per day.
2. Majority of the respondents are profit-oriented than being more motivated with customer satisfaction, where males showed higher incidence percentage than females. Overall, respondents claimed that hardworking and being patient are the most significant characteristics for ambulant business.
3. Respondents' business skills and practices are greatly associated with their business attitudes and behaviors. Thus, how an ambulant entrepreneur carries his behavior in the pursuit of his/her business routines would be used to describe his/her business handling techniques.

## RECOMMENDATIONS

As the most valuable part of this study, the following suggestions were drawn from the significant findings of the study.

1. Ambulant vendors may give priorities on the following aspects of the ambulant business as to maintain and sustain its business operations:

Financial Capacity and/or Constraints that is vital for the overall generation of the business.

Contributory factors as to support from then family and/or significant others – to be able solicit profitable sources of funds for the business.

Would have a planned time to follow in their business operations

Should consider savings amount even at the smallest possible amount, not necessarily in a daily basis.

May consider other marketing and management strategies (though may not hold formal setting) like promotions to increase market value of the business.

2. The Local Government Unit of Bayombong, or in Nueva Vizcaya as a whole, they should set programs that entail the welfare of these types of small-scaled businesses. Though, many/some would not properly be sharing taxes for that matter, the government can benchmark on the findings of this study as to how to generate policies and guidelines that may profitably manage the ambulant-micro business. In this way, both can sustain economic stability.

3. The academe (especially HEI's), which offers School of Business Education, may consider findings of the study to commence higher level of conducting similar researches that shall give implication to the business as its end-results (which is not part of the limitations of this study).

4. Business students can be trained and dwell on which type of ambulant business is at par in the market setting as to draw framework for their future feasibility studies and researches – and even setting their own businesses in the future.

5. The school can re-strengthen their linkage with the community by setting plans on how to conduct their community and extension programs based on the findings of this study.

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# **INFLUENCE OF PERCEIVED ORGANIZATIONAL SUPPORT ON EMPLOYEE WORK ENGAGEMENT: A CASE STUDY OF THE AVIATION INDUSTRY IN THAILAND**

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## **ABSTRACT**

According to organization management, employees are considered a key factor in enabling an organization to effectively deal with disruptive changes. This study aims to investigate the influence of perceived organization support on employee work engagement in the aviation industry in Thailand. The research question is *How does each feature of perceived organizational support influence employee work engagement?* Using the quantitative approach, data were collected from 592 respondents currently working in four aviation organizations in Thailand. The PLS-SEM was used to test the hypothesis. The findings show that adjustment support, career support and financial support were significantly related to employee absorption. The results of this current study are beneficial to human resource management and development in the aviation industry in Thailand as they enable organizations to determine the most effective ways to manage their employees. Implications of the results are also discussed.

**KEY WORDS:** COVID19, Human Resource Development, Human Resource Management, Perceived Organizational Support, Work Engagement

## INTRODUCTION

Employees are a source of competitive advantage for organizations facing a changing environment that disrupts operations. The current environment, particularly the COVID19 pandemic, has disrupted almost every business. Uncertainty brings fear of loss and affects employees' emotions. It also affects their work and psychological wellbeing. The changes brought about by the COVID 19 pandemic have generated the perception of job pressure and insecurity among employees. However, support from organizations may reduce the strain caused by such disruption (Charoensukmongkol & Phunsoonthorn, 2020). Such support can have a positive influence on employees' attitude toward the organization. During a crisis, a positive attitude is required in order to mobilize the behaviors required by the organization (Kapucu & Ustun, 2018). To support that notion, existing research reveals that organization support can create positive employee outcomes (Eisenberger et al, 2020). One significant outcome is employee work engagement (Kim & Lim, 2020). Extensive research into employee work engagement shows that there are numerous sources of employee work engagement (Smithikrai, 2019; Gimenez-Espert et al, 2020). Social exchange theory (SET) claims that positive interaction between an organization and its employees will increase positive organizational outcomes (Zagenczyk et al, 2020). Based on SET, this current study connects organizational resource levels as a source of organizational support (POS) and employee work engagement (Eisenberger et al, 2020; Lesener et al, 2020).

## BACKGROUND OF THE STUDY

The aviation industry is a key factor in many economic activities (Economic Co-operation and Development - OECD, 2020). The COVID19 pandemic has affected all businesses around the world, including the aviation industry. It has caused fluctuating practices and policies in organizations. This current study focuses on the aviation industry because global air transport represents a share of GDP and is related to many activities of other businesses such as the tourism and hotel industry. In Thailand, the dramatic drop in air travel is threatening many aviation organizations. Aviation organizations in Thailand are struggling with financial losses caused by the drop in domestic and international air travel (Kasemsuk, 2021). However, there are no specific policies for dealing with the situation. Several practices and policies have been launched, including layoffs, salary cuts, and leave-without-pay (Kasemsuk, 2021). These policies and practices have created a sense of uncertainty among employees. They are worried about their work future and their financial security. Organizational strategic plans are required to help employees adjust themselves and survive this disruption.

### Significance of the Study and Research Question

Based on SET, perceived organizational support (POS) and employee work engagement are linked in this study to investigate how POS influences employee work engagement in the aviation organizations in Thailand during the COVID19 pandemic. POS and employee work engagement are the multidimensional construct variables (Kraimer & Wayne, 2004; Schaufeli et al, 2006). POS consists of adjustment POS, career POS, and financial POS. Work engagement consists of vigor, dedication, and absorption. In the existing literature, it is not clear what role each feature of POS plays in employee work engagement and the multiple criteria of POS have not been incorporated into outcomes. Therefore, it was

thought valuable to examine the POS features in order to increase the ability of organizations to support employee work engagement conditions that would foster organizational performance. This current research aims to examine how each feature of POS influences employee work engagement in the aviation industry.

## **LITERATURE REVIEW**

This section provides an overview of related topics: (a) perceived organizational support, and (b) employee work engagement. Research hypotheses are inserted in the related section.

### **Perceived Organization Support (POS)**

Social exchange theory explains that the relationship between an organization and its employees is created through a process of change that requires both parties to move in a positive direction. For instance, an organization will develop policies which provide for both tangible and intangible support for their employees so that they do their best to achieve organizational goals. Properly implemented, these policies result in employees achieving a better quality of life, enhanced well-being as well as knowledge sharing, work engagement, and commitment (Eisenberger et al, 2020; Imran et al, 2020; Yang et al, 2020). Perceived organization support is defined as an employee's perception of favorable or unfavorable treatment from an organization and the extent to which the organization values their contributions and quality of life (Duan et al, 2020; Eisenberger et al, 2020). Kraimer and Wayne (2004) propose that POS is a multidimensional construct. It includes adjustment-related variables, financial support variables, and career support variables.

Adjustment POS is an employee's perception of the extent to which an organization assists their employees in adjusting to the workplace. Based on the theory of work adjustment (TWA), there is a reciprocal relationship between an organization and its employee (Brown & Lent, 2021). An organization implements policies and practices that assist employees in their adjustment to the organizational environment. Policies may include training or assistance programs. Given the nature of these practices, it is expected that adjustment POS will be related to employee work engagement (Yang et al, 2019). Yang et al (2019) state that an employee who has been supported in adjustment to work will "easily immerse themselves and focus on work" (p. 8). Career POS is the extent to which an organization pays attention to their employee's career needs. Organizational policies on career support can enhance an individual's ability to cope with current and future tasks, transitions, and challenges within their career (Caputo et al, 2020). Zacher et al, (2019) propose that career development involves attitude, beliefs, and competencies of an employee and that organizations should emphasize that career POS policies enhance employee work roles.

Financial POS is an employee's perception of the extent to which an organization helps employees to understand and effectively manage their financial issues (Choi et al, 2020). Research indicates that the more effective and adaptive financial programs are, the more employees feel less stress at work. It is recommended that organizations should provide financial advisor programs that can assist employees in planning their finances. Furthermore, a study by Saharuddin et al (2020) reveals that compensation, including both financial and non-financial packages, effects an employee's job satisfaction. Additionally, there

is empirical evidence that POS positively relates to employee outcomes e.g., Eisenberger et al (2020). However, studies on actually how financial support influences employee work engagement have been rare.

## **Employee Work Engagement**

*Employee work engagement* refers to a positive state of mind towards work. It is the “active, positive work-related state that is characterized by vigor, dedication, and absorption” (Bakker, 2011, p. 265). An employee with high work engagement shows high levels of vigor, dedication, and absorption (Schaufeli, 2012). Vigor refers to the pool of energy resources that helps an employee cope with a tough situation. Qurrahtulain et al, (2020) include vigor as one of the core components of work engagement and found that organizational factors, such as leadership, can affect an employee’s vigor in the workplace. Dedication is defined as a significant level of enthusiasm, inspiration, and challenge (Schaufeli, 2012). An absorbed employee is one completely concentrated on their work and may feel that time is passing quickly for them (Qurrahtulain et al, 2020).

A meta-analysis study by Lesener et al (2020) categorized employee vigor, dedication, and absorption into individual level, organizational level, leader-level, and group-level. The results show a significant relationship between organizational level resources and employee work engagement. A recent study by Teo et al (2020), showed that psychological work environment effects employee work engagement. Sitania et al (2020) find that compensation packages are significantly related to employee work dedication. Xu et al (2020) found that the external factor of social support was a predictor of employee absorption. Existing literature shows inconsistent results regarding these factors of employee work engagement; therefore, this current research has developed the following hypotheses:

Hypothesis 1: Adjustment support is significantly related to employee work engagement.

- Hypothesis 1a: Adjustment support is significantly related to employee’s vigor.
- Hypothesis 1b: Adjustment support is significantly related to employee’s dedication.
- Hypothesis 1c: Adjustment support is significantly related to employee’s absorption.

Hypothesis 2: Career support is significantly related to employee work engagement.

- Hypothesis 2a: Career support is significantly related to employee’s vigor.
- Hypothesis 2b: Career support is significantly related to employee’s dedication.
- Hypothesis 2c: Career support is significantly related to employee’s absorption.

Hypothesis 3: Financial support is significantly related to employee work engagement.

- Hypothesis 3a: Financial support is significantly related to employee’s vigor.
- Hypothesis 3b: Financial support is significantly related to employee’s dedication.
- Hypothesis 3c: Financial support is significantly related to employee’s absorption.

## **METHODOLOGY**

### **Participants and Procedure**

Data for this current research were collected using a pen-and-pencil questionnaire. A purposive sampling approach was used to recruit respondents who currently work in an aviation organization in Thailand that is registered with the Civil Aviation Authority of Thai-



land (CAAT). After agreeing to participate, participants were informed about the guidelines for the study and that responses would be anonymous. Written consent was obtained from all participants prior to distribution of the questionnaire. All procedures were carried out in accordance with the ethical standards of Kasem Bundit University and were approved by the university's Ethics Committee.

A total of 650 questionnaires were distributed to the sample respondents. Of this number, 600 were returned (92.30 response rate). After data screening, a total of 592 sets were usable. The sampling size has met the criteria for PLS-SEM analysis since Wong (2019) suggests that a sample size of 100-200 is a good start in carrying out PLS analysis. Of the total number of respondents, 297 (50.20%) were female and 295 (49.80%) were male; 433 (73.14%) were single and 159 (26.86%) were married; most were 21-35 years old (66.9%), 346 (58.4%) had been working in their current organization for 1–9 years, 526 (88.9%) were university graduates, and 494 (83.4%) were working in frontline positions.

### **Measurement**

The measurement instrument for *perceived organizational support* used a 10-item scale based on the instrument developed by Kraimer and Wayn (2004). Three of the items measured financial POS, a sample statement being “*My company has taken care of me financially*”; four of the items measured career POS, a sample statement being “*My company considers my goals when making decisions about my career*”; and three items measured adjustment POS, a sample statement being “*Help is available within my company whenever I have questions or concerns about working in this company*”. Cronbach's alpha scores were calculated to determine scale reliability, the results being 0.93, 0.92, and 0.80 respectively for each factor.

*Employee work engagement* was measured using a 9-item scale based on the Utrecht work engagement scale – UWES (Schaufeli et al, 2006). Three items measured vigor, a sample statement being “*At my work, I feel bursting with energy*”; three items measured dedication, a sample statement being “*When I get up in the morning, I feel like going to work*”; and three items measured absorption, a sample statement being “*I am proud of the work that I do*”. Cronbach's alpha scores were calculated to determine scale reliability, the results being 0.83, 0.88, and 0.76. respectively for each factor.

### **Data Analysis**

Data were analyzed using partial least square equation modeling (PLS-SEM) by using SmartPLS3 (program was used with permission on trial). There are two sub-models in PLS-SEM including the outer model, and the inner model. Table 1 summarizes the outer models. Wong (2019) and Hair Jr. et al (2020) reveal that the loadings of indicators should be higher than .40. The rho\_A coefficient should be equal to or higher than .7 to demonstrate reliability. The convergent validity indicated by AVE should be equal to or higher than .5. Furthermore, the collinearity of the measurement indicated by the VIF value must be less than .5. Indicators f2 and f3 have remained in the model because their rho\_A and AVE are higher than the cutoff level although the VIF values are higher than 5.

**TABLE 1.** Results summary of outer models.

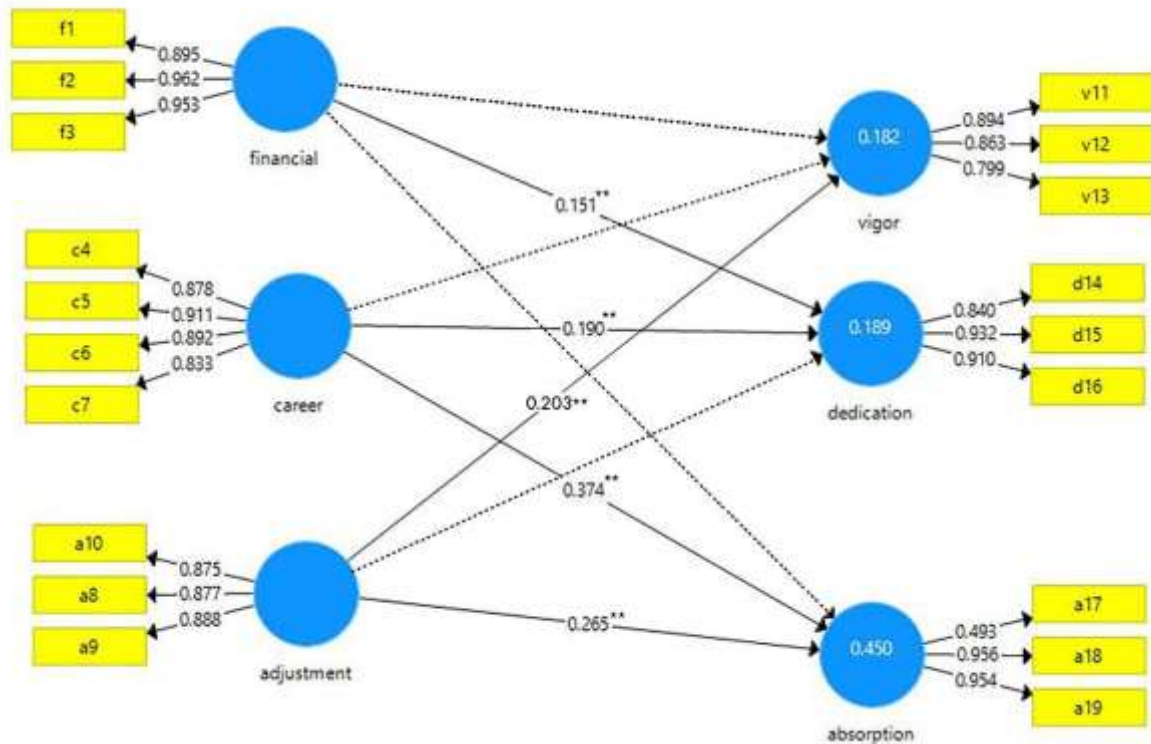
| Latent Variables   | Indicators | Loadings | VIF   | rho_A | AVE |
|--------------------|------------|----------|-------|-------|-----|
| Financial support  | f1         | .90      | 2.49  | .93   | .88 |
|                    | f2         | .96      | 8.63* |       |     |
|                    | f3         | .95      | 7.91* |       |     |
| Career support     | c4         | .88      | 2.67  | .91   | .80 |
|                    | c5         | .91      | 3.35  |       |     |
|                    | c6         | .89      | 2.89  |       |     |
|                    | c7         | .83      | 2.13  |       |     |
| Adjustment support | a8         | .88      | 2.21  | .86   | .77 |
|                    | a9         | .89      | 2.38  |       |     |
|                    | a10        | .88      | 1.92  |       |     |
| Vigor              | v11        | .89      | 1.60  | .95   | .73 |
|                    | v12        | .86      | 2.52  |       |     |
|                    | v13        | .80      | 2.17  |       |     |
| Dedication         | d14        | .84      | 2.11  | .94   | .80 |
|                    | d15        | .93      | 2.65  |       |     |
|                    | d16        | .91      | 2.72  |       |     |
| Absorption         | a17        | .50      | 1.13  | .91   | .69 |
|                    | a18        | .96      | 4.60  |       |     |
|                    | a19        | .95      | 4.52  |       |     |

Note: n = 592

### Hypothesis Testing

Figure 1 presents the structural model of this current research. The results show that the paths between adjustment POS and vigor, and adjustment POS and absorption (H1a and H1c) are significantly related ( $\beta = .20, .27$ ;  $p < .05$ ). The paths between career POS and dedication, and career POS and absorption (H2b and H2c) are significantly related ( $\beta = .19, .37$ ;  $p < .05$ ). The path between financial POS and dedication (H3b) was also significantly related. All significant relationships are shown by t-statistics that are higher than 1.96 and have a p-value less than 0.05 (Garson, 2016; Hair Jr. et al, 2019). The results do not confirm hypothesis 1b, 2a, 3a, and 3c (t-value  $< 1.96$ ,  $p > .05$ ). Table 2. summarizes the hypothesis testing.

**FIGURE 1: Structural Model**



Note: Dashed line represents non-significant path; \*\* p < .01

**TABLE 2.** Significance Testing Results of the Structural Model Path Coefficients.

| Hypothesis                  | $\beta$ – value | t-statistics | p-value | Result   |
|-----------------------------|-----------------|--------------|---------|----------|
| H1a adjustment → vigor      | .20             | 2.50         | .01     | accepted |
| H1b adjustment → dedication | .13             | 1.61         | .09     | rejected |
| H1c adjustment → absorption | .27             | 3.89         | .00     | accepted |
| H2a career → vigor          | .16             | 1.77         | .05     | rejected |
| H2b career → dedication     | .19             | 2.29         | .01     | accepted |
| H2c career → absorption     | .37             | 4.88         | .00     | accepted |
| H3a financial → vigor       | .09             | 1.68         | .10     | rejected |
| H3b financial → dedication  | .15             | 2.74         | .01     | accepted |
| H3c financial → absorption  | .07             | 1.58         | .09     | rejected |

## DISCUSSION AND IMPLICATIONS

The primary objective of this study is to investigate the influence of each feature of POS on employee work engagement. The research findings provide valuable information to aviation organizations in Thailand regarding which organizational support might be most effective for improving each feature of employee work engagement. The findings show

that adjustment POS explains 20% of its relationship with vigor, and explains 27% of its relationship with absorption. Career POS explains 19% of its relationship with dedication and explains 37% of its relationship with absorption. Lastly, financial POS explains 15% of its relationship with dedication. Thus, according to this study, career POS and adjustment POS play an important role in employee absorption. In line with the study of Brown and Lent (2021), career and adjustment contribute to individual demand-abilities at work. According to SET, if employees perceive that the organization values their efforts, they tend to have a positive appraisal and interpretation of their life at work. Employees become immersed in their work which indicates a positive state and behavioral engagement (Schaufeli et al, 2006).

Practically, the result shows that an organization needs to apply an appropriate strategy to support their employees. During the COVID19 crisis, some features of organizational support do not affect an employee's work engagement. The results show that adjustment POS does not affect employee dedication and career POS does not affect employee vigor at work. Additionally, financial POS does not affect employee vigor and absorption. This finding adds more understanding to a previous study by Eisenberger et al (2020). It helps organizations develop their strategic HRM plans, especially in aviation organizations in Thailand. Layoffs seem to be a common practice in aviation organizations in Thailand. However, previous research shows that after layoffs, organizations experienced a 20% decline in organizational performance (Sucher & Gupta, 2018). Aviation organizations in Thailand; therefore, might find that re-skills and up-skills might present a better alternative for preparing their future workforce. This study indicates strategies that should be employed to foster employee vigor, dedication, and absorption as these factors enhance employee performance during times of disruption.

## **LIMITATIONS AND FUTURE RESEARCH**

Some limitations of this study should be noted. Firstly, this is quantitative research with a cross-sectional design so data were collected during a single period of time. A longitudinal study may help to confirm the result. Furthermore, a qualitative approach may help to get in-depth information. Secondly, this study was conducted during the COVID19 pandemic. Thus, the external environment may have affected the perception of the participants. During such a period of disruption, organizations may have placed more demands on employees and may have had to struggle to provide full support to their employees. Thus, future research could investigate how organizational support is provided under more normal conditions.

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# **INSTITUTIONAL PROCESS-BASED PRODUCTIVITY OF LOCAL COLLEGES AND UNIVERSITIES IN REGION III: TOWARDS A PLAN OF ACTION**

by

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## **ABSTRACT**

This study determined the institutional process-based productivity of Local Colleges and Universities by looking into its different areas of implementation such as Curriculum and Instruction, Research, and Extension and Community Involvement. The participants were 115 college administrators and faculty from the local colleges in Region III. A survey questionnaire based on the Philippine Association of Colleges and Universities Commission on Accreditation was modified which was then accomplished by the participants through Google forms. It is concluded that LCUs have an overall high institutional productivity on the following areas: Curriculum and Instruction: Curriculum, Classroom Management, and Graduation Requirements; and both Priorities and Relevance in Research and Extension and Community Involvement. However, participants also said that they encountered some problems like the insufficiency of funds in research and extension needs and problems encountered by them. The researcher recommended the need for Institutional Process-Based Productivity Plan that ensures the provision of excellence in curriculum and instruction, success in research, and effectiveness in extension and community involvement must be prepared to address the needs and problems of an institution.

**KEY WORDS:** Institution, Process-Based Productivity, Local College, Action Plan



## INTRODUCTION

### Problem

This study is anchored on the three pillars of institutional process-based productivity of education specifically, curriculum and instruction, research and community involvement and extension. The development nowadays due to the advancement of science and technology has brought about many changes in the workplace, particularly in work relationships, administrative and instructional leadership in institutions of higher learning, particularly in community colleges where education is given to the financially challenged but academically justified students from the local communities who cannot afford a university schooling in the cities.

Additionally, the research has mainly focused on trust and networks in general, but no further investigation of various extents of institutional productivity, on curriculum and instruction, research, and community extension as possible factors of productivity, can be found. Furthermore, it is sensible to undertake that there may also be substantial within-college differences in the curriculum and instruction, research and community extension which could influence productivity differences in different province. However, most of the literature on productivity focusses on the country level analysis (Dettori et al., 2012; Artige and Nicolini, 2006).

As a novelty, this study aims to address all the aforementioned gaps in the previous research. It contributes toward addressing that academic gap by documenting and analyzing institutional process-based productivity, as a framework that takes places in localities within these local colleges. Rather than focus exclusively on the educative impact of curriculum and instruction, research and community extension of higher education expressed in the creation of these local colleges.

### Review of Relevant Scholarship

The way LCUs are being administered is not the same as the HEIs in the Philippines. As LCUs subsidizes come significantly from LGU heads (City or Municipal Mayors), any adjustment in the organization of a LGU, for example, can trigger changes in the LCU; hence, some of the time, work force are contrarily influenced, and may result to the unemployment of some faculty members or staff outcome is they leave the affiliation (Lacap, 2019). LGUs are basically the sole substance subsidizing the whole cycle of the LCUs (CHED, 2006). Contemplating this, most LCUs are not satisfactorily financed which come about into huge number of issues – absence of pleasantries (study halls, labs, exercise center, general media rooms, and different ancillaries), employees and different necessities of a respectable foundation of higher particularly those from the open country. (Macaraeg Jr, n.d.)

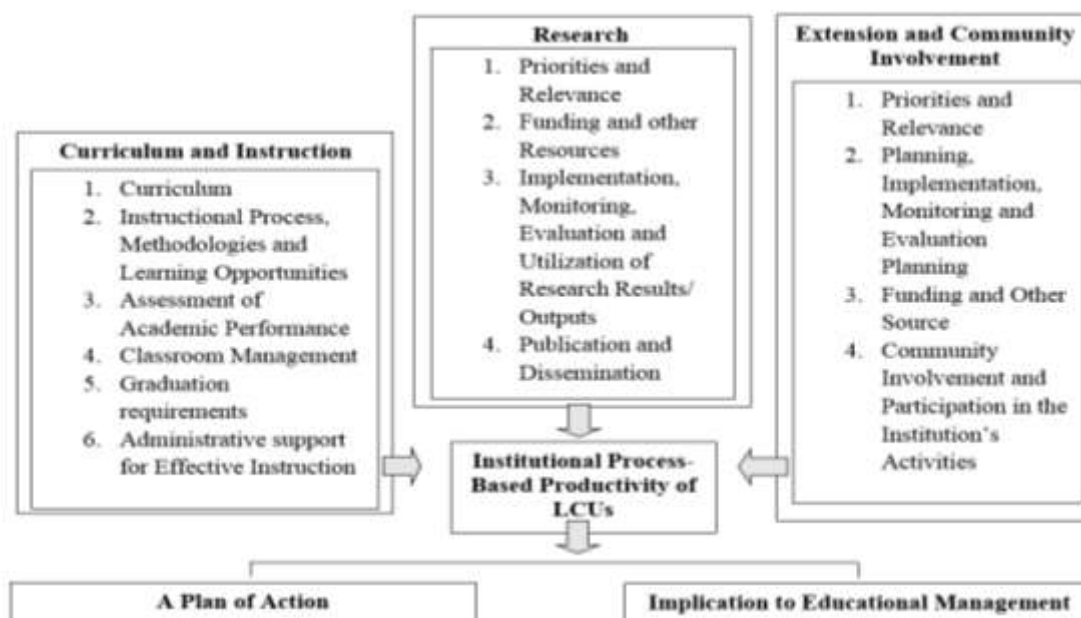
Institutional productivity is a principle deciding component of an association's degree of proficiency, quality, and viability. It quantifies how much the understudies, instructors, gatherings, and schools achieve items or administrations proposed (Glomo-Narzoles, 2012). To achieve the goals and objectives of higher education in the Philippines, HEIs both public and private are authorized to perform their purposes. Instruction, as a function of HEIs, is about buildup and pro-

gram of knowledge, skills, values, and attitudes through the instructional process (Caingat, 2004). It is the function of HEIs to disseminate known or recently produced theoretical or practical knowledge. Another function of the HEI is research. This function is expected to settle or disprove known knowledge and to generate new ones. According to Tingson (1998), most of the substantial research that have helped to shape curriculum came from colleges and universities. Another function of HEIs is the utilization of the research data. The researches done by HEIs should be published to for it to be disseminated and be part of the body of knowledge or its result may be adopted by community, this is the extension function of HEIs. Extension goes beyond research and instruction. Extension represents that aspect of instruction that enables learning beyond the campus walls, and it is the utilization of research findings to bring about change in the community.

Additionally, the research has mainly focused on trust and networks in general, but no further investigation of various extents of institutional productivity, on curriculum and instruction, research, and community extension as possible factors of productivity, can be found. Furthermore, it is sensible to undertake that there may also be substantial within-college differences in the curriculum and instruction, research and community extension which could influence productivity differences in different province. However, most of the literature on productivity focusses on the country level analysis (Dettori et al., 2012; Artige and Nicolini, 2006).

## Conceptual Framework

**FIGURE 1: Factors of Beginning Teachers' Needs**



The reason behind the line of questioning above is based on the assumption that some portion of the success attained by area that outperform their measurable resources is attributable to institutional productivity – whether it is in the form of cultivating the right workplace environment, putting forth the right policies (or discarding the wrong ones), investing in the best

supports and resources to maximize productivity, placing proper emphasis on professional development, or any other number of actions that can positively shape the environment in which the researcher pursues her endeavors.

According to this line of thinking, if the collective level of scholarly output produced by a program's faculty aligns with the level of resources the area (curriculum and instruction, research, community involvement and extension) puts into the research process – it is producing at the expected capacity – then the assumption, from an institutional process-based productivity, would be that the area is operating at an acceptable level. Additionally, this suspicion would remain constant paying little mind to where the zone dwells on the continuum of territories when positioned by and large exploration yield. However, if an area is not meeting its expected output, then there is an institutional process-based productivity problem to be found in that program's operations. And finally, as mentioned above, if a program is significantly out-producing its expected capacity, then it can be judged as highly effective and must be doing something better than its peers which warrants investigation – again, regardless of where it may reside in the 3-overall ranking of areas of curriculum and instruction, research and community involvement and extension.

### **Statement of the Problem**

The study sought to assess the institutional process-based productivity of Local Colleges and Universities as a basis for a plan of action.

Specifically, it answers the following questions:

1.How is the institutional process-based productivity of Local Colleges and Universities be described along:

#### **1.1Curriculum and Instruction**

##### **1.1.1Curriculum;**

##### **1.1.2Instructional Process, Methodologies and Learning Opportunities;**

##### **1.1.3Assessment of Academic Performance;**

##### **1.1.4Classroom Management;**

##### **1.1.5Graduation requirements; and**

##### **1.1.6Administrative support for Effective Instruction;**

#### **1.2Research**

##### **1.2.1Priorities and Relevance;**

##### **1.2.2Funding and other Resources;**

##### **1.2.3Implementation, Monitoring, Evaluation and Utilization of Research Results/ Outputs; and**

##### **1.2.4Publication and Dissemination;**

#### **1.3Extension and Community Involvement**

##### **1.3.1Priorities and Relevance;**

##### **1.3.2Planning, Implementation, Monitoring and Evaluation Planning;**

##### **1.3.3Funding and Other Source; and**

#### 1.3.4 Community Involvement and Participation in the Institution's Activities.

2. In what areas do Local Colleges and Universities have high and low institutional process-based productivity?
3. What local government and institutional support do Local Colleges and Universities received?
4. What are the problems encountered by Local Colleges and Universities in management and how do they deal with these?
5. What plan of action can be proposed from the findings of the study?
6. What is the implication of this study to educational management?

## METHOD

### Participant Characteristics

This study was participated in by one hundred and fifteen (115) respondents composed of administrators (presidents, vice presidents, deans/unit heads/ program coordinators) and faculty members employed in the local colleges.

### Sample Size

The participants were selected based on convenience sampling technique. This technique was utilized because the LCUs president permits only the conduct of the study via online conversation/ interview of the respondents by one hundred and fifteen (115) respondents composed of administrators (presidents, vice presidents, deans/unit heads/ program coordinators) and faculty members employed in the local colleges. To secure the safety of both side due to the current pandemic that affects the face-to-face data gathering procedure which was strictly prohibited the moment this study was conducted.

The distribution of the participants by designation was shown below.

| No.          | LCUs                                          | Designation |                |          |           |                     |           | <i>f</i>   |
|--------------|-----------------------------------------------|-------------|----------------|----------|-----------|---------------------|-----------|------------|
|              |                                               | President   | Vice President | Dean     | Unit Head | Program Coordinator | Faculty   |            |
| 1            | Baliwag Polytechnic College                   |             |                | 1        |           | 1                   | 4         | 6          |
| 2            | Bulacan Polytechnic College                   |             |                | 1        |           |                     | 5         | 6          |
| 3            | City College of Angles                        |             |                |          |           |                     | 6         | 6          |
| 4            | City College of San Fernando                  |             | 1              | 1        | 1         | 1                   | 10        | 14         |
| 5            | Eduardo L. Joson Memorial College             |             |                |          |           |                     | 9         | 9          |
| 6            | Guagua Community College                      |             |                |          |           |                     | 8         | 8          |
| 7            | Kolehiyo ng Guiguinto                         |             |                | 1        | 1         | 1                   | 8         | 11         |
| 8            | Kolehiyo ng Subic                             |             |                |          |           |                     | 7         | 7          |
| 9            | Limay Polytechnic College                     |             |                |          |           |                     | 8         | 8          |
| 10           | Mabalacat City College                        | 1           | 1              | 1        | 1         | 1                   | 10        | 15         |
| 11           | Pambayang Dalubhasaan ng Marilao              |             |                |          |           |                     | 7         | 7          |
| 12           | Gordon College                                | 1           | 1              | 1        | 1         | 1                   | 10        | 15         |
| 13           | Polytechnic College of the City of Meycauayan |             |                |          |           |                     | 4         | 4          |
| <b>Total</b> |                                               | <b>2</b>    | <b>3</b>       | <b>6</b> | <b>4</b>  | <b>5</b>            | <b>95</b> | <b>115</b> |

## Instrumentation

Permission from the PACUCOA (an accrediting agency in the Philippines which is closely like this study was adapted) has requested to use the self-survey instrument which was then modified and subjected to expert for validation. The researcher has then adapted the accreditation self-survey form of PACUCOA that will served as the main tool for data collection. The modified PACUCOA self-survey form was presented to the adviser and then submitted to experts (accreditors/ board of directors) who assisted in the revision and polishing of the statements to eliminate irrelevant repetitions and ambiguous terms. The statistician played a key role in the organization of the questionnaire. The comments and suggestions of the dissertation committee were taken into consideration in finalizing the Google form content before the Google link was sent via email and messenger and finally administered to the participants. It focused on effectiveness of the delivery of service in academic set-up in terms of curriculum and instruction, research, and extension and community involvement which are modified to fit the need of the study. It was divided into three parts.

Part I elicits information about the curriculum and instruction specifically curriculum, instructional process, methodologies and learning opportunities, assessment of academic performance, classroom management, graduation requirements and administrative support for effective instruction. Part II solicits information about research this includes priorities and relevance, funding and other resources, implementation, monitoring, evaluation and utilization of research results/ outputs and publication and dissemination. Lastly, Part III provides data about extension and community involvement in priorities and relevance, planning,

implementation, monitoring and evaluation planning, funding and other source, and community involvement and participation in the institution's activities.

Permission from the Presidents of the Local College and University of Region 3 was secured to conduct the study, upon approval, he then endorsed the survey (Google link) to the College President/ OIC, who expressed their willingness to be part of the study. Three databases (Yahoo, Google Form and Messenger) were used to collect data from the respondents to sidestep face to face interaction. Follow-ups through social media and via call/ text messages were made to ensure the collection of data. The researcher collected and retrieved the gathered data from the survey and asked the assistance of an expert in statistical treatment and analysis of data.

### **Research Design**

This study used the descriptive survey method of research. It elicits information about the institutional process-based productivity of LCUs. According to the book authored by Kumar (2014), descriptive study attempts to describe systematically a situation, problem or phenomenon which is prevalent with respect to the problem under study.

### **Analytic Strategy**

Frequency counts were used to describe the participants' perception as to curriculum and instruction, research, and extension and community involvement and their sub items, respectively. Mean was used to describe the level of adequacy and productivity of the respondents' institution.

Adequacy and productivity statements were rated using numerical scores shown in table below.

**Adequacy and Process-Based Productivity Descriptive Rating**

| <b>Adequacy</b>     | <b>Numerical Rating</b> | <b>Range Scale</b> | <b>Process-Based Productivity</b> |
|---------------------|-------------------------|--------------------|-----------------------------------|
| Very Adequate       | 5                       | 4.50 – 4.99/5.00   | Very High                         |
| More than Adequate  | 4                       | 3.50 – 4.49        | High                              |
| Adequate            | 3                       | 2.50 – 3.49        | Average                           |
| Moderately Adequate | 2                       | 1.5 – 2.49         | Low                               |
| Not Adequate        | 1                       | 1 – 1.49           | Very low                          |
| Missing             | 0                       | 0                  | Not Functioning                   |

The numerical rating ranges from 0 to 5, and each score is given its description based on the adapted self-survey form which was modified in this study.

## RESULTS

### Institutional Process-Based Productivity of LCUs

| <b>Institutional Process-Based Productivity</b> | <b>Mean</b> | <b>Adequacy</b>           | <b>Process-Based Productivity</b> |
|-------------------------------------------------|-------------|---------------------------|-----------------------------------|
| Curriculum and Instruction                      | 4.40        | More than Adequate        | High                              |
| Research                                        | 3.54        | More than Adequate        | High                              |
| Extension and Community Involvement             | 2.88        | Adequate                  | Average                           |
| <b>Total</b>                                    | <b>3.61</b> | <b>More than Adequate</b> | <b>High</b>                       |

The areas of curriculum and instruction and research got a more than adequate level of adequacy with high level of process-based productivity. While extension and community involvement have adequate level of adequacy with average level of process-based productivity. Curriculum and instruction occupy center stage in any educational program. The enhancement of the quality of these two allied areas deserves utmost consideration for they determine primarily the prestige and strength of the institution. Its areas of concern are encompassing, e.g.: curricula and program of studies, learning opportunities, assessment, instructional materials, classroom management, and academic performance of students, graduation requirements and administrative support for instruction. Research is a basic requirement for an educational institution to have a firmly established research and development program. Its thrust and priorities should be congruent to those identified in the development plans of regional and national Research and Development-oriented agencies such as NEDA, DOST, DA-BAR, CHED, etc. The extension function makes, and institution's presence felt in the community. It involves the application of existing and new knowledge and technology and those generated in the institution to improve the quality of life of the people. Through the extension program, people are empowered with appropriate knowledge, attitudes, and skills. Thus, extension services cater to various aspects of the community life, e.g., economic growth, promotion of health, environmental management, and social transformation.

### High and Low Institutional Process-Based Productivity of LCUs

LCUs have high institutional process-based productivity in the areas of curriculum and instruction and research. While average in extension and community involvement. High institutional process-based productivity in curriculum and instruction in this study implies that the sub items: curriculum, classroom management, and graduation requirements got a very adequate level of adequacy with a very high level of productivity. While in research, priorities and relevance got more than adequate level of adequacy with a high level of process-based productivity. Then around extension and community involvement, priorities and relevance have the highest level of adequacy of more than adequate with a high level of process-based productivity. Part of the findings of this study shows that there were some areas in institutional process-based productivity that have low process-based productivity or minor concerns. This could be a manifestation that no institution is perfectly going on. It can be enumerated as to the area of extension and community involvement: community involvement and participation in the institution's activities which have low institutional process-based productivity with moderately adequate level of adequacy.

### Local Government and Institutional Support LCUs received

| Support                                       | <i>f</i> |
|-----------------------------------------------|----------|
| Funding                                       | 102      |
| Peace and order                               | 100      |
| Buildings and maintenance of roads            | 103      |
| Health                                        | 110      |
| Solid waste disposal system and road cleaning | 115      |
| Management of traffic                         | 115      |
| Drainage and sewerage                         | 102      |
| Sports, parks and recreation                  | 89       |

According to the participants of this study the LGU supports the LCUs through proper allocation of budget funding, peace and order, buildings and maintenance of roads, health, solid waste disposal system and road cleaning, management of traffic, drainage and sewerage and sports, parks and recreation. While LCUs received institutional support in terms of curriculum and instruction shows that the institution has provisions for substitution or special arrangements. Institutional support in terms of research implies that the institution allocates funds for the conduct of faculty and student research activities and establishes linkages in the local/national/International levels for funding support and assistance. In addition, institutional support in terms of extension and community involvement reveals that there is a definite and approved budgetary allocation for the extension program and the budget for the extension program is utilized as proposed planned.

### Problems Encountered by LCUs in Management

| Problems                                                               | <i>f</i> |
|------------------------------------------------------------------------|----------|
| lack of seminars/ trainings                                            | 8        |
| limited collaboration                                                  | 2        |
| lack information                                                       | 3        |
| insufficient computer facilities                                       | 4        |
| recognition for outstanding performance                                | 4        |
| not all faculty conduct research                                       | 5        |
| lack of research funds                                                 | 25       |
| no system for monitoring completed and on-going research study reviews | 13       |
| unpublished research                                                   | 6        |

In terms of curriculum, participants enumerated (1) lack of seminars intended for students to improve their cognitive skills and (2) limited collaboration to industry partners to hire OJT students. They deal with it by facilitating in house seminars provided by faculty expert in certain field of study and the local college may subject local companies to have a must or memorandum of agreement that the companies must implement a student-to-industry automatic hiring. They also stated that their syllabi are not updated. They address by conducting an in-house seminar provided by trained faculty/ administration. Additionally, when it comes to the availability of instructional materials, computer facilities are not sufficient the respondents informed the apt



authority to request for budgetary allocation. Indeed, system of reward/ recognition for outstanding performance was least prioritize that is why some college planned to develop a program but due to pandemic it was postponed. Another problem was not all faculty conduct research the administration released a memorandum order to encourage participation to research activities. Moreover, some colleges do not give research funds to finish research and no available equipment and materials respondents deal with it by consuming available free software and they use personal and/or local research amenities. The scarcity of opportunities for research trainings was also indicated by respondents, no system is being done for monitoring completed and on-going research study reviews and research remains unpublished. Colleges deal with it by sending research personnel for trainings and re-echo for colleagues is an exchange, including system for monitoring and revised the research manual and collaborate for library exchange of research publication and publication through inter college association.

## **CONCLUSION**

Institutional process-based productivity of LCUs in this study was engaged through curriculum and instruction, research, and extension. Based on the findings of the study, it was concluded that:

1. LCUs are guided by laws in a wider perspective, and specifically before engaging or doing anything, LCUs consider CHED Memorandum Orders (CMOs), Executive Orders (EOs), and research and other documents which may be used as strong legal bases.
2. Curriculum and instruction, research and extension and community involvement were well implemented and truly addressed and augmented the participants needs.
3. LCUs do somehow make sure that the extension activities conducted are research-based and a sincere and true community is established.
4. It is concluded that LCUs have high institutional process-based productivity in the areas of curriculum and instruction and research. While average in extension and community involvement.
5. There were some issues and challenges in community engagement, particularly in extension.
6. This could be a manifestation that no organization is perfectly going on, but it needs attention so that a not so good impact or possible negative results may be lessen if not totally solved.

## **RECOMMENDATION**

From the findings and conclusions of this study, the succeeding's are highly suggested:

1. To administrators of LCUs, they should continue performing their inherent duties and responsibilities in managing the institution, college, or university as a good follower through to what have been assessed by the accrediting agency.
2. To propose an enhancement of the curriculum to suit the needs of the present COVID19 pandemic.
3. For the deans/ unit head/ program coordinator, they should conduct a seminar workshop on the latest teaching strategies.
4. To make a merit system for instructors to actively engage with research and extension.
5. That the extension personnel, research, develop, plan and initiate substantial, effective, locally based programs geared toward making community members more self-sufficient, better informed, more strongly empowered.
6. That the proposed Local Colleges and Universities a Plan of Action for 2021-2026 be studied and portrayed by the administrators to further reassure institutional assurance of teaching to increase the productivity in cooperation of both the employees and the institution.
7. That suitable application and provision to the plan be functioned on by the administrators, the faculty, and the staff.
8. And the upcoming researchers to conduct a comparable study along the extent of institutional process-based productivity to further authenticate the findings of this study.

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**IMPACT OF PSYCHOLOGICAL SAFETY ON TEAM LEARNING, WITH THE ROLE  
OF THE LEADER'S VALUES, TRANSFORMATIONAL LEADERSHIP  
AND POSITIVE INTERPERSONAL RELATIONSHIP  
A CONCEPTUAL PAPER**

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**ABSTRACT**

A Teams capability to learn, particularly the post COVID-19 situation will be one of the most important expertise which will set the business apart from its competitors as it is a crucial element for organizational learning and change, innovation and team performance. Learning together in a group can create social risk but psychological safety, which is a common value within the team that it is risk free to engage in learning activities, can positively impact team learning. As leaders can contribute in producing a safe team environment, the question is how can leaders encourage a climate in which team members feel safe in order to learn together as a group? This conceptual paper synthesizes literatures on the association between psychological safety and team learning. Also, on how values (on productivity, participation, people) of the leader, transformation leadership style and positive relationships with the team can result in team learning through their effects on team psychological safety. This can be an implication of HRD practices on developing leaders to be able to support psychological safety in their teams.

**KEY WORDS:** Team learning, Psychological Safety, Transformational Leadership,  
Leader's Values, Interpersonal Relationship



## INTRODUCTION

The organizations facing high ambiguities in today's world are being conscious of the fact that their issues cannot be sorted out by just only few keymen or talents. On the contrary, teams are becoming the basis to transform, learn and improve. (Cauweliet et al., 2016) Many years ago, Senge suggested that teams are the imperative component in the foundation of organizational and if teams fail to learn, the organization also fail to learn. (Senge 1990). However, often teams do not learn well and because it is in which the team decide to proceed with actions that majority of people in the group may have different opinions with, but they omit to communicate what they really feel. (Kayes et al., 2005). Edmonson was the first who initiated the concept of team psychological safety and described it as explained as "a shared belief that the team is safe for interpersonal risk taking and demonstrate the impact on team learning." (Edmonson, 1999, p.1157). According to research, there is significance to study this relationship because of how safe members feel they are able take risk within group will have an effect on team learning. By putting employees together and requiring them to just get the job completed is insufficient if the company expects a long-term impact on team learning. The organizations should put into consideration of some strategies in advance so that team are able to create team's interpersonal risk low risk climate. (Cauweliet et al., 2019) Furthermore, this is the reason why it is crucial to understand how leadership can solve these issues and encourage learning together within a group. (Raes et al., 2013)

## LITERATURE REVIEW

### Defining team learning and its importance

It is defined as "a team is a collection of individuals who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and who are seen by others as an intact social entity embedded in one or more larger social systems" (Cohen, 1997, p.241) and teaming is the skill of communicating and coordinating with people from different masteries, social ranking and places (Edmonson 2019). The notions of "team" and "learning" together creates "team learning" which confines both mental processes generating knowledge, expertise development and also displaying the aspect of social (Van den Bossche et al., 2006) process which means that each individual can learn from the colloques at the workplace or from their acquaintances in the social settings. (Cauweliet 2019) This learning can happen through recurring cycle of reflection and action by posing questions, getting feedbacks, trial and error and articulate discussions on the mistakes that permit everyone to process the information in a way that they can change and transform (Edmonson 1999). The new mutual understanding of the knowledge is then able to be developed as a result of learning activities in group (Goodman et al., 2011). There is an integrative literature by (Raes et al, 2013) which proposed a definition by Decuyper et al. (2010) that "team learning is an active, reflexive and boundary crossing process of balancing 'co-construction' and 'constructive conflict' between team members and between team members and team external stakeholders." (Ducuyper, 2010, p.290) More specifically, learning can be formed as a change in the scope through four activities which are possession of information, allocation of information, clarification of information and information storage and retrieval (Huber 1991).

During the rapid moving environments, the significance of team learning has been debated as organizations have faced a change from individual to collective work structures (Edmonson, 1999; Kozlowski et al., 2006). Also, team learning is perceived as the possible source for the organization to sustain competitive advantage in order to compete (Breso et al., 2008) as the speed of changes in the world increases, organizations must be able to also change at a fast pace or will be at risk of diminishing out of business. (Harvey et al., 2018) This is because team learning is also another key factor for new creations (Widmann et al., 2016). This is supported by statement that many organizations are encountering with growing stream of data and new creations, however only the ones who are able to keep learning will be able to remain in this aggressive business rivalries. (Lee et al., 1995). Also, when comparing team learning with individual learning, it has higher level of effectiveness in the result as well as higher level of tolerance of diversity among members in the group (Decuyper et al. 2010). This helps organizational become more responsive to change. (Raes et al., 2013)

Another reason why team learning is important is because both individual and team performance are positively influenced by team learning. (Harm 2015) Motivational, social cohesive, and impact of cognitive (Slavin, 1996) plays a role on the effect of individual performance. The trait activation theory argues that under the context of learning in team setting can trigger those members with a high individual learning orientation to show even higher individual learning efforts. (Hirst et al., 2009) Also, in the aspect of team performance, team learning can give attention on team processes so teams that clearly and systematically address team work challenges through team learning can together develop team performance. (Keyes et al., 2005). Thus, it is no surprise then that workplace of this century gives high importance on team-based learning. (Edmonson 2012)

### **Define psychological safety and its relationship with team learning**

An increasing number of researches show that psychological safety can happen at work and, when it does, that people do actually have courage to speak, articulates ideas, report mistakes that it can be categorized as “learning behavior.” It is important to first understand that psychological safety is not about being pleasant with one another, it is not another word for trust, and it is not about reducing performance standard. It does not mean that everyone always agrees with each other just for being polite and even though trust and psychological safety have much in similarities, they are different notions. Psychological safety is experienced at a group level, while trust often refers to relationship between two people or two parties, psychological safety create environment for more sincerity, more challenging, more synergetic, and thus also an increase in successful working environment which means that it is not just an “anything goes” (Edmondson 2019)

The notion of psychological safety has been explored in relation to learning (Edmonson et al., 2015) and is an aspect of social capital (Lee et al., 2011) as well as organizational culture. (Baer et al., 2003). Psychological safety was introduced to the organizational sciences approximately fifty years ago as a crucial part of the “unfreezing” phrase required for organizational learning and change. It was suggested that psychological safety decreases perceived interpersonal risk, mitigates barriers to transform, and which leads to endurance of failure without revenge, rejection or guilt (Schein and Bennis 1965). Interpersonal risk means that when people are concerned over the risks of being declined from the group, being embarrassed and as simple as fear that other people will not think well of them. This fear has been around from the past in mankind history because if a man is rejected from

the group, he or she might not survive from starvation and thus this has cultivated human being into getting used to managing our reputation in order to be free from these risks. Even though an ideal reputation might build a safe zone for each individual, the main issue is that organizational learning cannot be generated (Edmondson 2015). In addition, asking for help can also be perceived by a team member as looking unskillful and incompetent. (Cauwelier et al., 2019) An individual has to take an interpersonal risk with other members in the group when involving in activities as simple as making conversation, (Wyss et al., 2002) and in the more advance learning activities which are feeling courageous to speak up, participating, and trial and error (Gibson et al., 2003). In conclusion, it means that when they engage in various type learning activities it gives distress to the employees that it can bring social risk of judgements by the team (Decuyper et al., 2010; Sterman, 1994). This is defined as “defensive routine” in terms.” (Argyris, 1990, p.1728)

However, a research shows psychological safety helps mitigates these perceived risks of participating in learning activities (Nembhards et al., 2011) and eliminates the concern that others will give feedback in a shameful way. (Cauwelier et al., 2019). This concept was also defined as one mental phrase that it has appears as a key factor in assisting employee engagement (Edmondson, 1999; Kahn, 1990), as employees are expected to be more participative during work, which has resulted in organization’s keyman trying to recognize the keys that facilitates the enthusiasm by employees to take risks and exert their energies into work (Kahn, 1990). Individual working in teams with a high level of psychological safety feel that their behaviors and responses will contribute to team and thus, will not lead to negative consequences (Nembhards et al., 2011). As a result, this will set a productive environment that allows knowledge distribution (Tsai et al., 2014) as voicing up about what bothers them and mistakes that can affect performance will occur more often in teams. There is a study which mentioned that those with learning behaviors perceives errors as crucial part of the self- improvement (Chiu et al., 2011) and also at the group levels (Wilken et al., 2006) In addition, psychological safety can assist team members to reflect and behave in innovative ways by involving in experimental learning. On the contrary, in teams with low level of team psychological safety, members report that they would only speak up if they were the one who caused the problem, not if it was someone else’s error. (Cauwelier et al., 2019) Thus, an environment of psychological safety contributes to successful team learning (Harms 2015) and whether you’re teaming with new colleagues all the time or working in a strong and sturdy team, effective teamwork emerges best in a psychological safe work environment (Edmondson 2019).

### **Influence of leader’s values (productivity, people, participation), transformational leadership style and interpersonal relationship**

Organizations anticipate their leaders to guide each individual employees and team to learn so that they are enable to adapt in order to compete in the market. (Levitt et al.,1988; Luo et al., 1999). However, one of the challenges leaders in many organizations are facing now is how to develop the workplace conditions that will support the positive level of new creation (Yukl 2009), and also the kind of workplace which provides safe environment that mitigate threats and possibility of humiliation that can occur during learning as a group (Kozlowski et al., 1996).

It is thus important to understand how leadership can overcome these problems and able to promote team learning. (Raes et al., 2013)

This is reported that “leader values can result in team learning through their effects on team psychological safety and team learning.” (Wong et al., 2010, p.99) These values are such as participation, people, and productivity which leads to encouraging, positive and productive relationship (Wong et al., 2010). As the basic notion of psychological safety is that members in the group must be able to “*participate*” in learning activities (Heller and Wilpert 1981), these participative behaviors can be strengthened by encouragement messages and personal support from leaders which is part of the people value where leaders give attention to each individual (Wong et al., 2010). Leaders who value this will encourage their team members to find a mutual agreement together by inviting them to articulate ideas and eventually will recognize and workout the issues as a group as a result of feeling safe to learn (Likert 1961) Also, leaders who value productivity will require their members to adhere to the guidelines which they believe to increase work effectiveness (Wong et al., 2010). This is consistent with Argyris and Schon who have mentioned that learning can be advanced by inspiring the relationship between leaders and team members through leader values. (Argyris, 1978 and Schon 1996)

Apart from leader’s values, there is also a study which aims to broaden the knowledge on the relationship between transformational leadership style and team learning which also taking the psychological safety into account in the relationship (Raes et al., 2013). Members in the team are motivated by transformational leaders to feel fearless to take risk when communicating about themselves in an attempt for other people to acknowledge their capability (Camelli et al., 2013). Leaders who possess this leadership style will encourage their team members to rise above their personal concerns, by using a charismatic model figure to influence them, personal support, cognitive development, inspiration (Eagly et al., 2003) by making them feel safe (Zaccaro et al. 2008). Also, they can encourage experimental of new creations as they tend to support the team to think out of the box (Vera and Crossan, 2004; Jansen et al., 2009)

Another important factor related to leader is the positive relationship. Psychological safety is likely to occur as a result of the positive relationship between leaders and team member (Frazier et al., 2017) as it is the basis for learning development (Knight 2000). This emphasizes the requirements for leader to develop a supportive mindset and behaviors in order to improve the ability for team to learn successfully (Edmondson et al., 2001). This was mentioned that positive relationship can influence on how much members feel it is safe to engage in team learning activities (Kahn, 1990; Edmonson, 1999) as it exerts information to the team members regarding how much support they will receive, the ability that they can bounce back from difficulties, coherence, trust and capability (Kahn 1990).

## **PRACTICAL IMPLICATIONS AND FUTURE RESEARCH**

The major challenge for all level of leaders is how to generate the environment which support and maintain learning together as a group (Yukl 2009). Since results indicate that psychological safety is impacted by positive leader relations, training and development sessions for those interested in leadership positions might need to be emphasized on the aspect of ability to create safe environment in team in order to engage team in learning activities. (Frazier et al., 2017)

This paves a way for future research on main effects to developing an in depth understanding of when and where leadership matter. The scope conditions of psychological safety remain an area with the lack of study (Edmondson et al., 2014).

## **CONCLUSION**

This paper provides important insights into the relationship of psychological safety and team learning as team learning is seen as possible key success factor for the organization in maintaining high levels of competitive advantage. One of the barriers in learning in team setting is the fear of interpersonal risk but psychological safety can help minimize this by reducing perceived threats, mitigating barriers to change, and creates a context which support people to be able to tolerates failure without retaliation or humiliation. Also, it is important that leaders play a role to support this safe and non-threatening team environment by foster the values of the leaders on (productivity, participation, people), engaging in transformation leadership style and positive interpersonal relationships with the team members, can result in team learning through their effects on team psychological safety. Thus, training leaders to enhance transformational leadership skill, development good relationship with subordinates, and creating values to give attention people, productivity and participation to include and engage team is important.

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**A PHENOMENOLOGICAL STUDY TO EXPLORE WHAT KEY COPING STRATEGIES USED DURING ORGANIZATIONAL CRISIS IMPACTED BY THE COVID-19 OUTBREAK IN TOURISM INDUSTRY IN THAILAND**

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**ABSTRACT**

In 2020, the whole world was shaken by the light of the COVID-19 outbreak and Thailand was severely impacted, particularly in the tourism industry. Many organizations, however, managed to survive the crisis. This research paper aims to explore what coping strategies are used during this crisis to survive by conducting in-depth interviews using a phenomenological method on six business owners or the top executives working in the organizations from the hotel, restaurant, transportation and medical service, which are all related to the tourism industry. There are three main themes which are: key attitudes (e.g., will power to survive), key actions (e.g., higher involvement of management and restructuring), and key consequences (e.g., innovation and organizational resilience). These themes help to illustrate what it takes to lead in crisis, which form a 'key coping strategies model' and how it has facilitated the organizations to survive during crisis time.

**KEY WORDS:** COVID-19, Organizational Crisis, Organizational Resilience, Crisis Leadership, Tourism Industry, Psychological Capital

## INTRODUCTION

As I was a business owner who was also a CEO of Siam Food Supply co. ltd, which was a frozen food factory from 2010-2017, I had a great opportunity to experience dealing with crises myself. It has brought tremendous difficulties to my life, but the same time those experiences have cultivated my managerial skills and expertise, and also the ability to cope with challenging situations and this is why I am interested in this phenomenon. In the organization literature, crisis is defined as “an event or time period involving high levels of uncertainty, important issues, and time urgency” (Pearson and Clair, 1998, p. 60). The COVID- 19 incident is one of the biggest challenges to many business employers as two of the participants- Sam and Nadol compared those early days of the crisis as;

*“a bad dream that I want to wake up from it” and “it’s like if planet earth got attack by aliens from mar”.*

It has been stated that “scholars have called for more investigations of how teams and leaders can effectively deal with crisis” (James et al., 2001, p.173) and even though there are a number of studies aim to improve comprehension of leadership, there is relatively few understandings into leadership during crisis (Milosevic et al., 2017)

Thus, I have developed following research question that guide me through the process of inquiry

- How do business owners or top executives working in organizations related to tourism industry in Thailand survive the organizational crisis impacted by Covid19 outbreak?

## LITERATURE REVIEW

### **A brief understanding on the impact of COVID-19 outbreak on tourism industry worldwide and in Thailand**

Many countries are relying their economics and growth on tourism which make it an imperative factor for many destinations (Richie 2003). COVID-19 crisis has created of major challenges for tourism throughout the world, and it has brought the tourism industry into uncertainty. (Jones and Comfort 2020). “The crisis was described by Kristalina Georgieva, Managing Director of the International Monetary Fund as ‘a crisis like no other’ (World Economic Forum 2020). Also, mentioned by the United Nations World Tourism Organization (UNWTO) in 2020 that ‘the worldwide outbreak of COVID-19 has brought the world to a standstill and claimed that tourism has been the worst affected of all major economic sectors’” (Jones et al., 2020, p. 75). In the case of Thailand, Bangkok post stated that “Thailand’s economy is expected to be impacted severely by the COVID-19 pandemic, shrinking by at least 5 percent in 2020, particularly in the tourism sector, which makes up close to 15 percent of Thailand’s GDP” (Bangkok Post, 2020). The travel restrictions brought on by the Thai government, as a response to the Covid-19 pandemic, have contributed to an extreme decline in number of foreign tourists with an expected drop of 83% from 2019 (Tourism Authorism of Thailand 2021).



## **Crisis and Organizational Crisis**

The definitions of crisis and organizational crisis will be provided to improve understanding of this phenomena and as the use of the term-crisis differs depending on the context in which it is being used (Preble 1997). It is a situation which can successfully cause the imbalance condition (Paraskevas 2006). Under the organizational context, it is where the situations are extremely high in uncertainties, the organization is facing low profitability and the survival is at stake. The response time to crisis is limited and also in many times, there are many choices to be made in the decision makings. (Pearson and Clair 1998). In addition, crises are striking disturbances on an organization's daily routines which will examine the capability of the key person who has to make the final calls, and it can intimidate the core values and cultures of the organizations (Dayton 2009). In the aspect of response to crisis, it was suggested planning for crisis is the skill of mitigating the risk and uncertainty in order to allow you to be more in control (Fink 1986). This view reflects today's management approach in dealing with crises, which views them as separated events that can be analyzed in terms of causes, effect, caution and coping (Shrivastava 1993).

## **Psychological Capital**

Psychological capital is an imperative basis component in human being. It relates to one self's ability to be own reliance in order to improve, and it is reflected by hope, resilience and optimism. In addition, after people facing with hardship, self- adaptation plays a major factor in supporting individual rehabilitation on being optimistic, being resilient and being hopeful from difficulties they face. Hope is defined as people's endurance to accomplish their objective. Resilience is also defined as endurance to always keep looking for enhancement in order to achieve goals when encountered with difficult challenges and optimism is defined as positive mindsets in regards to success (Mau et al., 2020). A study has shown that "positive psychological capital (PsyCap) is a core strategic resource that leaders leverage in crisis" (Milosevic et al., 2017, p. 2). This means that leaders who have higher level of PsyCap will be able to handle adversities crisis brings in, with the value that goals can be achieved even with problems (Milosevic et al., 2017). The conservation of resources (CoR) theory may be used to explain how hope, resilience and optimism helps leaders survive through the crisis as it explains how human being makes the best effort to acquire, maintain, preserve and cultivate their resources that they perceive as important, and they will try to mitigate loss, particularly during crisis (Avey et al., 2010). "Psychological capital is a positive psychological resource, and people are motivated to maintain and protect it (Luthans et al., 2007, p. 5).

## **METHODOLOGY AND METHODS**

### **A Phenomenology Study**

As it was explained that "phenomenological methodology seeks to understand the 'experiences' of a set of individuals who share a common experience" (Burkholder et al., 2020, p.53) and about a phenomenon (Creswell and Poth 2018), thus I choose to use an in-depth interview for the primary data collection. Based on the semi-structure interview technique to allow me to ask probing questions such as "tell me more" along the way and so I can obtain a description of shared experience during COVID-19 crisis and also able to derive

themes that can embrace the heart of these shared experiences during crisis (Creswell and Creswell 2018).

### Selection criteria

For the selection criteria, the participants who were interviewed are business owners or top executives who are working in the organizations that were severely impacted by the tourist restriction launched by the Thai Government, such as a drastic decrease in revenues and profit. Although the elements in the tourism industry will differ between countries, there are certain sectors which are clearly identified as being elements in this industry, such as the accommodation sector (e.g., hotel), travel agents and tour operators, and transportation (Lickorish and Jenkins 1997). Also, Thailand has always made big plans for the tourism sector but even more so now the medical tourism has often been displayed as involving patients from higher income countries travelling in to access cheaper and better care (Bangkok Post 2020) Therefore, I selected six business owners or the top executives working in the organizations from the hotel, restaurant, transportation and medical service which have highly impacted by Covid 19. I used the purposive selection technique to select all participants as they all have experiences in running business in tourism business. I have illustrated demographic of all participants in table 1 below.

**TABLE 1.** Demographics of the participants (I used pseudonym name to identify them)

|                 | <b>Sam</b> | <b>Nadol</b> | <b>Arisa</b>   | <b>Direk</b>              | <b>Garn</b>    | <b>Dari</b>                     |
|-----------------|------------|--------------|----------------|---------------------------|----------------|---------------------------------|
| <b>Gender</b>   | Male       | Male         | Female         | Male                      | Male           | Female                          |
| <b>Age</b>      | 38         | 60           | 34             | 50                        | 41             | 36                              |
| <b>Position</b> | MD/ Owner  | MD/ Owner    | MD/ Owner      | Head of<br>Hotel<br>Group | MD/ Owner      | Executive<br>Director<br>/Owner |
| <b>Industry</b> | Restaurant | Hotel        | Transportation | Hotel                     | Transportation | Medical<br>Service              |
| <b>Duration</b> | 16 years   | 24 years     | 8 years        | 2 years                   | 6 years        | 5 years                         |

The average time for each semi structure interview which was about 45 minutes and I received consent from all participants in the beginning. I also asked the permission to record the interview. I attempted to maximize the trustworthiness of this study by following certain procedures. For credibility, I used member checks, sending transcripts to the corresponding participants via hard copies so that they could review and verify the transcript. All of them agreed with the transcript and no revision needed to be made at this step. Final step I sent the research question, topic and interview questions to an academic expert which is Asst. Prof. Pawinee Petchsawang to review in order to achieve internal validity,

aka credibility. In addition, I engaged in peer debriefing process, asking my classmates to ensure the analyses were grounded in the data (Marshall and Rossman 2016). I presented the first transcripts to my classmate and professor at the School of Human Resource Development – NIDA and they went through with the coding and categorizing. Based on their suggestions, I made comparisons with mine to create confirmability.

The interview questions were as follows;

1. Is there any impact of covid19 outbreak on your business?
  - 1.1 If yes, please describe the impact on your business.
  - 1.2 How did the tourist restriction measurement impact your business?
2. How did it impact you mentally and physically?
3. Please describe how do you normally cope with pressure?
4. Please tell me about a time when you had to deal with crisis like during Covid19 pandemic, did you use any particular strategies to handle the situation?
  - 4.1 If yes please elaborate how did you cope and what was the result?
  - 4.2 If no, please explain why?
5. Is there any support you receive during those time that you think help you to handle the situation?
  - 5.1 If yes please elaborate what kind of support you received.
  - 5.2 If no, which kind of support you expect you have received.
6. How did you experience working with the exe team in dealing with the issues during crisis?
7. Is there any feedback from your team during that time?
8. How would you respond to those feedback?
9. Are there any other experiences or feeling you experienced during crisis you would like to share in regard to Covid19 outbreak on your business?

## **FINDINGS AND DISCUSSION**

Under their verification, I started coding and categorizing the data, using taxonomy coding, In vivo coding and emotions coding by using thematic data analysis which is to search for themes and patterns by coding (Creswell and Creswell 2018), I identified the emerging themes grounded in the data. Resulting from the analysis of data, several imperative findings emerged. There are 3 main themes which emerged from the data analysis which are 1. the key attitudes, 2. the key actions and 3. key consequences

## **Key Attitudes**

First main them is the key attitudes which is "a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols" (Hogg et al., 2005, p. 150) Under the first them- the key attitude, I found several sub-themes which are 'will power to survive', 'being- optimistic', and 'being objective'.

### ***Will Power to Survive***

The first sub-theme under the key attitude is "having will power to survive". The achievement of the leaders lies in the ability of them to motivate and stimulate their followers. (Bass et al 2016). Leaders who are able to show assurance may have an advantage over the ones who show uncertainty (Fransen et al., 2015) Sam mentioned during the interview that "there is never doubt in my mind we wouldn't get through the pandemic and that was the attitude that I shared throughout the organization that we will find a way through this." And "I will do everything in my power to survive". Nadol also said that "some people encountered with this kind of situation and decided to just fall, like I don't know, I give up. No! don't run away from the problem. If you encounter with any problems, fix it, do not run away from it. It will get worse if you runaway."

### ***Being Optimistic and Being Hopeful***

The second sub-theme under the key attitude is "being optimistic and being hopeful." Optimism and hope are both components in the positive psychology which is connected to positive organizational behavior. (Luthans et al., 2007) Hope is displayed as part of achievement in work as a positive mindset as well as factor in handling with difficult situation. (Uusiautti 2008) Arisa, one of the participants mentioned that "we must go on so, the company will not shut down and we can be prepared for the new opportunity" and "you know that you cannot give up and you know covid will end very soon but since we do not know when you just have to keep on thinking." Consistent with Dari who said that "first I panic, but later on I look at it as an opportunity."

### ***Being Objective***

The third sub-theme under the key attitude is "being objective." It means that the result of the crisis is viewed as a single objective and they use an instrument to be able to obtain the data speedily (Grant et al., 2004). Sam has mentioned that "avoid making decisions based on emotions but making decisions based on facts", also by Arisa that "we cannot be too emotional because it will clot our mind" and "whenever there is an issue, we just find scenario, one two and three to solve the issue. It not fails for the first time but we just have to keep changing"

## **Key Actions**

First second main them is the key actions and sub-themes are 'high involvement of management', 'effective communication', and 'innovation and adaptation to change'. Under this second theme of, I have categorized what have been done or what have been taking in actions by the participants into sub-themes.

### ***Higher Involvement of Management***

The first sub-theme under the key actions is “higher involvement of management by re-structuring. More specifically, high involvement management is a managerial orientation that supports higher flexibility, taking more control, teamwork and collaboration within the team (Wood et al 2011). The actions in response to this is the re-structuring the to be more horizontal instead of vertical. The horizontal structure of the organization permits each individual to be able to achieve a higher job performance and allow them to be able to improve in which they could not achieve under the traditional hierarchical structure (Worothy 2021). Direk, one of the participants has mentioned that; -

*“We reduced the layer in the organization chart, so let’s say initially there were several layers. What we did was, we immediately put the executive team together which included the managing director. We brought in key personal from a line below us, so let’s say restaurant service staff as well. We got everyone on board in a more let’s say horizontal org chart versus a vertical one.”*

### ***Effective Communication***

The second sub-theme under the key actions is “*effective communication and information sharing*”. It was indicated that “communication is the most important trait for crisis leaders, which presents continued opportunities for communications managers to be deeply involved before and during an event” (Allen, 2004, p. 11). This is to create support, cooperation and team work from the employees and to minimize resistance to change. That opened communication channel with all employees throughout the process was crucial.” It is impossible to be a great crisis manager or leader if you have lack of excellent communication skill (Allen 2004)

According to Dari “it is important to manage the expectation of employees. She communicated with her staff every week to update on the situation and what are the plans. She also said “you can’t just inform them everything all at one time.” She further said that “there has to be a transparency because you are asking for salary reduction. There has to be fairness across the organization and the policy has to be announced.” Similar to Garn’s opinion, who said that “I think communicating with the staff at all level and this goes right down to the line staff of that company is doing to get through the situation so they don’t feel panic.

### ***Adaptation to Change***

The third sub-theme under the key actions is “adaptation to change”. It was said that “it is well documented that successful leader must adapt to manage change as well as conflict” (Baldoni, 2004, p. 5). Sam said that “in that time in a very short period we had to make a lot of changes in order to adapt to the situation.” Arisa supported that “we have to be ready and very quick to change. And we need to capture what is the trend because it changes every 2 -3 months just like Covid. Therefore, we need to be able to keep ‘adapting’ to these changes.”

## Key Consequences

The third main theme is “*key consequences*” and the sub themes are ‘*innovation*’, ‘*organizational resilience*’

### *Innovation*

The first sub-theme under the key consequences is “*innovation*”. Innovation can range from production innovation, process innovation, marketing innovation, and business model innovation (Kahn 2018). The success story related to innovation shared by Sam is that his company created another delivery only sub brand called ‘ABC’, by using existing the main brand’s infrastructure. According to Sam “ABC brand has worked quite well and it has contributed approximately 10% of our total company’s revenue and approximately 25% of all of our delivery revenue without having to add any additional staff this was a success that we saw out of covid-19 has continued after covid-19 has almost come to an end and this is this is a very positive case study for all of us.” The new innovations by each business sector are illustrated in Table2.

**TABLE 2.** New Innovations created during Covid19 outbreak

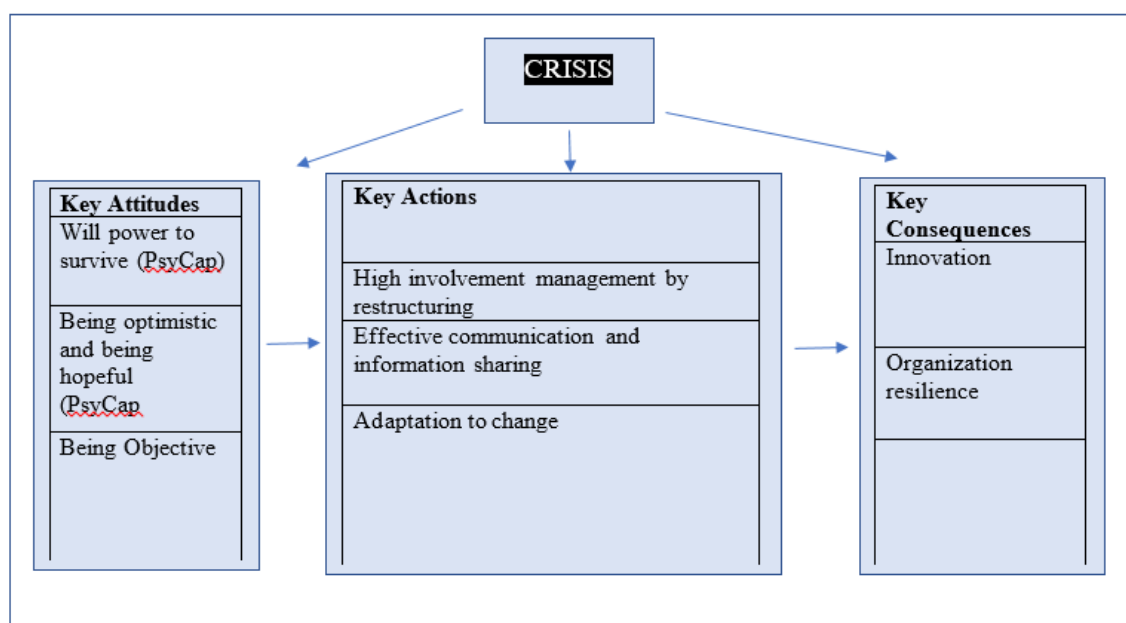
| Business Sector           | Innovations                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------------------|
| Hotel                     | New business model: the Alternative State Quarantine (ASQ)                                       |
| Restaurant                | New Cloud kitchen<br>New sub brand<br>New delivery platform                                      |
| Transportation            | Adding new consumers segmentation (Thai customer)<br>New online application for customer support |
| Medical Concierge Service | Adding new consumers segmentation (Thai customer)                                                |

The second sub-theme under the key consequences is “*organization resilience*”. The important concept regarding the survival of an organization during times of great pressure and uncertainty, it relies on the capability of people in the organization to endure in their work regardless facing with the difficulties and this is how employees display resilience (Bhamram et al., 2004). All of the six organizations in this study have shown organizational resilience as the notion refers to the ability to transform, develop and make it through the difficult time (Hamel et al 2003). Also, resilient businesses are able both to bounce back from uneasiness and to display adaptive capacity, which may lead to far-reaching changes in the overall business concept (Fiksel 2006). Resilience is generally defined as the capacity to recover from difficulties, challenge, conflict, failure, or even positive events, progress, and increased responsibility (Luthans 2002). Arisa also told me something extraordinary interesting that “later on when Thailand is opened to tourists again, we will be ready to sell, not just for the Thais but also for the foreigners because we have skill sets ready for both markets. So, when the foreigners come back, there will only be a gain, it is not as if when the tourists come back and we will be clueless of how to sell to the Thais because we have become accustomed to this market.”

## CONCLUSION

The finding has concluded that key attitudes of the leaders (being objective, being hopeful and optimistic and having will power to survive), in which two of the attitudes are considered part of the psychological capital, key actions taken by the leaders (higher involvement of management and restructuring, effective communication and adaptation to change), key consequences in the organizations as a result of facing crisis (innovation and organizational resilience) all contributed to key coping strategies that business owners or top executives working in organizations related to tourism industry in Thailand used to survive the organizational crisis impacted by Covid19 outbreak. Since tourism industry is severely impacted by COVID19, people who are working with tourism companies during COVID-19 were under great psychological pressure with unpredicted situations such as uncertainty of income, risk of life and health and uncertain of income (Mao et al., 2020). Therefore, I would like to illustrate a table showing key coping strategies model used during crisis from the findings in this study.

**FIGURE 1:** Key coping strategies during crisis model



## LIMITATION AND FUTURE RESEARCH

When I became interested in this topic, I had a talk over the phone with K Chattan Kunchon na Ayudhaya, a deputy governor of Tourism Authority of Thailand the 2nd of March 2021. According to Mr. Chattan, Phuket and Bangkok are the top most important destinations for tourism industry in Thailand and hospitality sector is the major contribution of the total income. In future research, I may expand the data collection scope to other provinces in Thailand such as conducting an interview with hotel business owners in Phuket. Also, I did not conduct an interview on all business sectors related to tourism industry due to limitations on the access I have.

## **Practical Implication and Recommendation**

One of the sub theme which is being objective. The *scenario planning tool* is an important tool which can support leaders to be objective. The common tool that all participants used to be objective is the “scenario planning”, as it seeks to develop in individuals, teams and organizations the ability to be flexible and the ability to efficiently manage the uncertainties (Chermack et al 2017). Furthermore, there is a research which mentioned that scenario planning has a natural connection with resilience, which is defined as how people and teams in the organization are able to persist stressful situations and succeed despite unpredicted challenges (Chermack et al 2017)

Another recommendation for HRD practices is the reskill and retraining in order to create innovation as a consequence. According to Arisa “now we have to focus on training, in which we have never done before. When there’s Covid it was a great opportunity to create a training program for retraining and up skill. We let them do new skill for example service staff working at the booth will need to work as a sale during that time to acquire new customers.” Also, there could be a policy to strengthened everyone in the company the positive psychological resources. (June and Yoon 2015)



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**AN ASSESSMENT OF MUSCULOSKELETAL DISORDERS FROM COMPUTER  
WORK AMONG OFFICE EMPLOYEES BY RAPID OFFICE STRAIN ASSES-  
MENT METHOD AND MUSCULOSKELETAL DISORDER QUESTIONNAIRE**

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**ABSTRACT**

The objective of this study was to assess musculoskeletal disorders (MSD) among office employees. MSD risk assessment was carried out by Rapid Office Strain Assessment (ROSA) method. The Cornell Musculoskeletal Discomfort Questionnaire was employed to identify body part discomfort and pain level from 0 to 10. A total of 50 office staff (41 females and 9 males) of a private university participated in this study. The study group had average age and work experience of 26.00 (SD 3.11) and 2.34 (SD 1.93) years respective-

ly. The average hour per day of computer work was 7.66 (SD 1.57) hours whereas the average consecutive computer work without a break was 2.22 (SD 1.57) hours. The results of MSD risk assessment showed that the study group had an average ROSA final score of 7.64 (SD 1.31). The ROSA final scores of higher than 5 indicated that the participants were at high risk of MSDs. Contributing factors to the MSD risk included working in poor designed computer workstation, improper placement of keyboard, mouse and monitor, and lengthy computer work hours without frequent breaks. Results from the questionnaire interview indicated that 70.0 % of the participants developed MSD in several body parts. Five most reported body part having pain included neck (34.0 %), lower back (32.0 %), hip/buttock (32.0 %), upper back (28.0 %) and right wrist (28.0 %), with average pain levels of 4.00, 4.38, 3.50, 4.50 and 3.5 point respectively. Pearson's correlation analysis revealed a significant correlation between the final ROSA scores and body part pain levels ( $r = 0.322$ ,  $p = 0.02$ ). This study confirms that poor computer ergonomics causes MSD among computer users. The ROSA is a good alternative technique for preliminary risk assessment of MSD for employees working with computer.

**KEY WORDS:** ROSA, Musculoskeletal Disorders, Computer Ergonomics, Office staff

## INTRODUCTION

Rapid advancement in technology contributes to the increasing incorporation of computer into production and service industries. It is well recognized that personal computer is a needful equipment in today working environment. Although the benefit of computer application is tremendous, prolonged computer use and improper working postures have been reported to cause musculoskeletal disorders (MSDs). Studies of musculoskeletal symptoms and pain in various groups of computer users had been documented (Keir et al., 1999; Karlqvist et al., 2002; Gerr et al., 2002; Jensen et al., 2002; Seghers et al., 2003; Wahlstrom, 2005; Village et al., 2005; Ellahi et al., 2011; Baker et al., 2013; and Mirzaei et al., 2014).

Computer and accessories are basic equipment for office work. Generally, office work demands high worker's attention and concentration in order to finish the task in time. Thus spending long hours working in front of the computers is a common work practice among office workers. Researchers suggested that the lengthy computer work with improper work postures resulted in musculoskeletal pain of the neck, shoulders, back and upper extremities among office workers (Jensen 2003; Korhonen et al., 2003; Calik et al., 2013; Mirzaei 2014; Piranveyseh et al., 2016; Rodrigues et al., 2017 and Singh & Singh, 2019).

A few studies on MSDs in Thai office workers had been reported. Janwantanakul et al. (2008) found a high prevalence of musculoskeletal symptoms of head/neck, back and upper extremity among general office workers in 54 companies. Chaiklieng et al. (2011) reported a high prevalence of musculoskeletal pain among office workers of a public university. They detected a significant association between the musculoskeletal pain and seat height. Further investigation showed a high incidence of shoulder pain among the study sample (Chaiklieng and Krusun, 2015). Vichivanives & Mekwimon (2015) found frequent eye problem and MSDs among academics and supporting staff of a public university. In spite of a large number of private education institutions in Thailand, information on computer related health problems of the office staff in Thai private universities is scarce. Unlike public university, Thai private universities do not receive subsidy from the government. The decreasing demand for tertiary education among high school graduates and the oversupply of private universities have force the management of private universities to strictly control on operation cost. This practice contributes to less hiring of office staff and hence resulting in higher computer workloads compared to those of public university office staff. Hence, there is a need to investigate computer related health problems in this workforce for a better understanding of MSDs problem among private university office workers. The objectives of this study were to assess the prevalence of musculoskeletal disorders and musculoskeletal risk from computer work among office employees in a private university.

## **METHODOLOGY**

### **Study Sample and Data Collection Procedure**

This research was a cross-sectional survey study. Fifty office employees of a private university voluntarily participated in this study. Inclusion criteria for the eligible participant included good health, at least six months of working with desktop computer and no history of muscle and bone injury or related chronic illnesses. The day before data collection each subject was requested to have enough sleep and avoid heavy exercise, sport, or physical activity. All participants had signed informed consent form. Ethical clearance was obtained from the Ethical Review Committee for Human Research and permission got from all Faculty Deans in the university.

### **Data Collecting Tools**

The Rapid Office Stain Assessment (ROSA) was used to measure ergonomic risk factors of the participants working with computer. The ROSA is a picture-based screening tool for quick assessment of postural risk of seated computer work by considering computer chair characteristics (chair height, seat pan depth, armrest height and its condition, and back support adjustment), and the placement of monitor, telephone, mouse and keyboard. It is known that improper workstation results in awkward working postures which in turn contributes to musculoskeletal strain. ROSA final scores (1 to 10) is calculated from the combination of risk scores of the computer components and duration of time spent in using these components. A score of higher than 5 indicates the need for further investigation and immediate adjustments (Sonne et al. 2012). Considering its specificity to computer use in the workplace, Rosa has been successfully used in other studies (Matos & Arezes 2015; Poochada & Chaiklieng 2015).

The Cornell Musculoskeletal Discomfort Questionnaire (CMDQ) of the Human Factors and Ergonomics Laboratory at Cornell University was used to identify the body parts that experienced discomfort or pain (Hedge et al., 1999). An 11-point Numeric Rating Scale (NRS 11) was applied for self-rating of pain intensity from 0 (no pain) to 10 (worst pain imaginable) (Hawker et al., 2011).

### **Data analysis**

Descriptive statistics was used to describe demographic characteristics, life style, computer work practice, MSD affected body parts and Rosa scores. Pearson's correlation analysis was used to evaluate the relationship between the ROSA scores and the reported pain levels of the participants.

## RESULTS

### Demographic information

A total of 50 office employees participated in this study. Eighty-two per cent of the participants were female. Table 1 describes the demographic characteristics, health behaviors and computer work practice of the participants. An average age of 26 years and average work experience of 2.34 years indicated that the participants were young workforce. With an exception of only a quarter getting enough exercise, the participants had healthy life style as non-smoker, non-drinker and occasional drinker. However, they had a lengthy computer work of 7.66 hours per day and 2.22 hours of consecutive computer use. None of them received formal training on computer ergonomics.

**TABLE 1.** Sample Characteristics

| Characteristics                   | Mean (SD)    |
|-----------------------------------|--------------|
| Age (years)                       | 26.00 (3.11) |
| Work Experience (years)           | 2.34 (1.93)  |
| BMI (kg/m <sup>2</sup> )          | 23.06 (4.98) |
| Smoker                            | 0.00 %       |
| Drinker (occasional)              | 34.00 %      |
| Exercise (regularly)              | 24.00 %      |
| Computer work (hours/day)         | 7.66 (1.57)  |
| Computer consecutive work (hours) | 2.22 (1.42)  |
| Ergonomic training                |              |
| Formal training                   | 0.0%         |
| Self-learned (internet)           | 40.0%        |

### Ergonomic risk

Results from ROSA assessment gave an average final ROSA score of 7.64 (SD 1.31). This suggests that the office workers are at high risk of developing MSDs. Table 2 illustrates the average ROSA scores of Section A, B and C and contributing risk factors of each section. It reveals that Section A (chair characteristics) has the highest ROSA score compared to the score of the other two sections.

Table 3 shows the higher average ROSA score of female workers (7.83) compared to that of the males (6.78). When taking a closer look into the ROSA score of each participants, it was found that 16 females (39 per cent) of the 41 female participants had the final score of 9 – 10 while the highest score among the male participants was 8. This observation explains the discrepancy of the average ROSA scores between the two groups.

## Musculoskeletal disorders

Table 4 illustrates the MSDs data collected by the Cornell Musculoskeletal Discomfort Questionnaire. It reveals that 70 per cent ( $n = 35$ ) of the participants have developed musculoskeletal symptoms. Most of the affected participants (78.95 %) reported having strain in multiple body parts. Five most frequently affected body parts include neck (34 %), lower back and hip (32 %), upper back and right wrist (28 %), right shoulder (24 %), and left shoulder (20 %). However, when pain intensity is considered, the body parts with five highest pain levels (in descending orders) are right shoulder (5.41 points), right upper arm (4.50 points), upper back (4.50 points), lower back (4.38 points), neck (4.00 points), left shoulder (4.00 points) and right forearm (3.75 points).

Table 5 shows the result of relationship analysis between the musculoskeletal pain and the final ROSA risk score of the participants. The Pearson correlation analysis reveals that there is a significant correlation between the reported musculoskeletal symptom among the office workers and the ROSA risk score ( $r = 0.322$ ,  $p\text{-value} = 0.02$ ).

**TABLE 2.** ROSA results and risk factors of each section.

| Section                          | Mean ROSA Score (SD)           | Risk Factor                                                                                                                                                                                           |
|----------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Section A<br>Chair               | 7.62 (1.34)                    | Chair height: 62 % improper height.<br>Seat pan: 70 % improper depth.<br>Arm rest: 100 % non-adjustable arm rest.<br>Back support: 82 % improper back supports (non-adjustable, worker lean forward). |
| Section B<br>Monitor & Telephone | 3.38 (0.73)                    | Monitor: 64 % improper monitors (too high, document no holder).<br>Telephone: 14 % too far reach and no hands-free option.                                                                            |
| Section C<br>Mouse and Keyboard  | 4.94 (0.84)                    | Mouse: 64 % reaching to mouse, long duration use.<br>Keyboard: 96 % too high, wrist extend and long duration use                                                                                      |
| Final ROSA                       | 7.64 (1.31), Min = 5, Max = 10 |                                                                                                                                                                                                       |

**TABLE 3.** Mean final ROSA scores, classified by gender.

| Sex               | Mean ROSA (SD) | Min - Max |
|-------------------|----------------|-----------|
| Female ( $n=41$ ) | 7.83 (1.28)    | 5 - 10    |
| Male ( $n=9$ )    | 6.78 (1.09)    | 5 - 8     |
| Total ( $n=50$ )  | 7.64 (1.31)    | 5 - 10    |



**TABLE 4.** Reported MSDs and pain levels of body parts.

| <b>Affected body parts</b> | <b>n (%)</b> | <b>Mean Pain Level<br/>(SD)</b> | <b>Range<br/>Min – Max</b> |
|----------------------------|--------------|---------------------------------|----------------------------|
| Neck                       | 17(34.00)    | 4.00 (1.27)                     | 2 – 6                      |
| Shoulder, left             | 10(20.00)    | 4.00 (2.36)                     | 1 – 8                      |
| Shoulder, right            | 12(24.00)    | 5.41(1.83)                      | 3 – 9                      |
| Upper back                 | 14(28.00)    | 4.50 (1.34)                     | 2 – 7                      |
| Lower back                 | 16(32.00)    | 4.38 (1.45)                     | 1 -7                       |
| Upper arm, left            | 1(2.00)      | 2.00 (0.00)                     | 2                          |
| Upper arm, right           | 7(14.00)     | 4.57 (1.72)                     | 2 – 7                      |
| Elbow, left                | 0(0.00)      | 0 (0.00)                        | -                          |
| Elbow, right               | 0(0.00)      | 0 (0.00)                        | -                          |
| Forearm, left              | 2(4.00)      | 3.00 (1.41)                     | 2 – 4                      |
| Forearm, right             | 8(16.00)     | 3.75 (1.83)                     | 1 – 6                      |
| Wrist, Left                | 4(8.00)      | 3.50 (2.38)                     | 2 – 7                      |
| Wrist, right               | 14(28.00)    | 3.50 (1.65)                     | 1 – 7                      |
| Buttock/Hip                | 16(32.00)    | 3.50 (1.67)                     | 1 – 6                      |
| Thigh, left                | 6(12.00)     | 3.33 (1.96)                     | 2 – 7                      |
| Thigh, right               | 7(14.00)     | 3.57 (1.90)                     | 2 – 7                      |
| Knee, left                 | 8(16.00)     | 3.13(1.86)                      | 1 – 7                      |
| Knee, right                | 7(14.00)     | 3.57(1.90)                      | 1 – 7                      |
| Lower leg, Left            | 5(10.00)     | 3.00(1.58)                      | 1 – 5                      |
| lower Right leg            | 5(10.00)     | 3.00(1.58)                      | 1 – 5                      |
| Whole body average         | 35 (70.00)   | 4.08 (1.34)                     | 2 – 8                      |

**TABLE 5.** Relationship analysis of pain levels and final ROSA scores.

| <b>Variable</b>              | <b>Final ROSA scores</b> |                              |                  |
|------------------------------|--------------------------|------------------------------|------------------|
|                              | <b>n</b>                 | <b>Pearson's correlation</b> | <b>p - value</b> |
| Average reported pain levels | 50                       | 0.322                        | 0.022            |

## DISCUSSION AND CONCLUSION

This study found a 70 per cent prevalence of MSDs in a group of 50 office workers of a private university. The high prevalence of MSDs in the study sample was due to their exposure to several risk factors. One major risk factor was the awkward working postures in poorly design computer workstation. We observed that general office desks and chairs, instead of special computer furniture, were used in all computer workstations. These low cost office desks had no underneath sliding keyboard tray, hence the keyboard and mouse were inevitably placed on the desktop. This created improper heights of keyboard and mouse. In additions, the low quality office chairs possessed improper characteristics of back support, seat pan, armrest and seat height. All of these risk factors in combination with prolonged computer work (average 7.6 hours per day) and long duration of consecutive computer use (average 2.2 hours) induced MSD of the neck, shoulders, neck, and upper and lower back among the participants (Table 4). These risk factors resulted in high ROSA score of chair, mouse and keyboard sections and the final ROSA (Table 2). The result of Pearson correlation analysis revealed a significant medium correlation between the subjective musculoskeletal pain level and the final ROSA score ( $r=0.322$ ,  $p=0.02$ ). Final ROSA score of higher than 5 indicates that the participant is at a high risk of developing MSDs and immediate mitigation measure is needed (Sonne et al., 2012).

Our finding of high MSD prevalence in the office workers is in accordance with those of Janwantanakul et al. (2008), Chaiklieng et al. (2011) and Chaiklieng and Kruson (2015). Janwantanakul et al. (2008) reported a MSD prevalence of 63 per cent among office workers while Chaiklieng et al. (2011) published a prevalence of 69.0 per cent. Chaiklieng and Kruson (2015) found a MSD prevalence of 80.00 per cent in office workers. They also revealed that office workers working on computer for more than 4 hours per day had a high to very high ergonomic risk. Vichivanives & Mekwimon (2015) also found frequent pain of neck, shoulder, upper and lower back and wrist among university office workers who spent 6 – 10 hours per day on computer. The 24 per cent shoulder pain found in this study was in accordance with Chaiklieng and Kruson (2015). They reported 24.8 per cent of shoulder pain among office staff in a public university. The apparent relationship between poor computer workstation and musculoskeletal symptom observed in our study was supported by the study of Chaiklieng et al. (2011). They reported a significant association between inappropriate computer workstation and musculoskeletal pain.

This study found a higher MSD risk among the female office workers compared to that of the male workers (Table 3). This finding may be due to disparity factors between females and males such as task discrepancy, muscular endurance, stress management and other psychosocial factors. Redivo and Olivier (2021) suggested that work related psychosocial factors including over commitment were related to higher MSD.

In conclusions, this study reports a high MSD prevalence among office staff of a private university. ROSA is a convenient and reliable method for quick assessment of computer related MSD risk in office worker. The high MSD prevalences in multiple body parts and the high final ROSA score indicate an urgent need for the enterprise to establish a sound

policy on computer health and safety and to install an effective computer ergonomic program for safe use of computer.

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# EXPLORING INNOVATIVE LEADERSHIP: A QUALITATIVE STUDY

by

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## ABSTRACT

In this twenty-first century where it is said to be the time of innovation and also the time of crisis, innovative leadership is of utmost interesting topic but still less explored. This study explores the underlying essences that bring about innovative leadership. Five CEOs and founders of startups and technology companies, whose companies have reputations in innovations, were interviewed using phenomenology approach. To gain insight, the participants were asked of their experiences in regards to innovative leadership. This study gives a deeper understanding of innovative leadership's qualities. The results showed that innovative leadership is a specific combination of transformational leadership, entrepreneurial leadership, behavioral leadership theory, and more new aspects. The main qualities of innovative leaders are trying new things, trusting in team, emphasizing in innovative culture, having good people skill, having passion, and being good learners. This study's findings contribute to both practical HRD professional and academic scholars.

**KEY WORDS:** Qualitative Research, Innovative Leadership, Transformational Leadership, Entrepreneurial Leadership, Leadership

## **INTRODUCTION**

In fast-changing situations of modern time, leadership is a critical element in the survival of the organization. Many of the organizations failed because they do not have the right leader. Leadership plays a crucial role in successfully fostering innovation (Sritanyarat, 2016). Especially, in this twenty-first century where it is said to be the time of innovation and also the time of crisis, innovative leadership is of utmost interesting topic but still less explored. Innovative leadership induces creativity and creativity is part of innovation. Where innovation is defined as the practical implementation of ideas that result in the introduction of new goods or services or improvement in offering goods or services (Schumpeter et al., 1983). Organizations of all time demand innovative leadership to do miracle. That miracle creates innovation that gives competitive advantage over the competitors (Sultana & Rahman, 2012).

A board review of leadership theories suggested that they are deficient without the element of innovative leadership (Alsolami et al., 2016). Many studies in the past had focused on transformational leadership in regards to innovation, innovative leadership is still fairly served (Sultana and Rahman, 2012). Sritanyarat (2016) suggested in her report that qualitative research method could provide more in-depth understanding of the answers on attributes of leaders in innovative organizations.

This study is a qualitative study framed to tackle the underlying essences that bring about innovative leadership. The research objective is to explore the qualities of innovative leadership in compared to other type of leadership style theories. The setting of the research is done in Bangkok, Thailand. Five CEOs and founders of startups and technology companies, whose companies have reputations in innovations, were interviewed using phenomenology approach. The study will contribute to both practical and theoretical aspects. The findings will help practitioners in corporate strategy on leadership and organization development interventions. And theoretically, the study will contribute to the literature on leadership and innovative leadership in Thailand context.

## **REVIEW OF LITERATURE**

### **Concept of Innovation**

Innovation is a concept that is not a new phenomenon. It has been long been studied since the study of mankind itself (Fagerberg, 2004). Innovation by definition means the practical implementation of ideas that result in the new products or services or in the improvement of product or services (Schumpeter et al., 1983). The distinction of invention and innovation is also to be made. Invention is the first creation of idea on product or process, but innovation is the use of that invention to create value (Fagerberg, 2004). The process of innovation is the introduction of something new such as idea, product, service, process, method, or invention to solve the current or future problems in order to satisfy people's needs (Sen & Eren, 2012). Innovation can be classified in different aspects. Innovation can be classified as product innovation, process innovation, and business idea innovation. In

terms of speed and structure, innovation can be classified as incremental, radical, architectural, and modular innovation. (Henderson & Kim, 1990).

## **Leadership Theories**

Different theories of leadership emerged as time and evolutions of the world passed by. Since the Great Man Theory, Trait Theory, Behavioral Theory, Contingency Leadership, Transactional Leadership, Transformational Leadership, Entrepreneurial Leadership, and many more. Since the time of the great man theory of leadership, the topic has long been fascinated by HRD and psychology scholars. Leadership, by definition in organizational context, is the influencing process of leaders and followers to achieve organizational objectives through change (Lussier & Achua, 2010). In modern time, contemporary scholars have proposed various theories, taking from different perspectives. Three main leadership theories of Behavioral leadership theory, Transformational leadership, and Entrepreneurial leadership are relevant to this study. They are reviewed and mentioned here. Along with the concept of Innovative leadership, the subject of interest in this paper, is reviewed.

### **Behavioral leadership theory.**

Behavioral Leadership Theory researchers believe that leaders can be trained, thus not necessary born-to-be. And effective leadership behaviors can be taught through study, practice, and experience (Goff, 2003). Relationship between manager and employees, who are his or her subordinates, helps the manager in influencing the employees. The employees who are closed to the manager will likely to be motivated to work. The manager's traits and attitudes effect his or her behavior toward the employee, which in turn render the quality of manager-employee relationships (Lussier & Achua, 2010). The behavioral leadership theory emphasizes on two characteristics of a leader, one is the genuine concern for employees, or employee-centered; and two is a strong desire to finish the task, or job-centered (Bass, 1990).

### **Transformational leadership.**

Transformational leaders seek to influence their followers to work enthusiastically and maximizing their performance toward the same goal, by employing their charisma, stimulating and meeting emotional needs of the followers. Transformational leaders inspire followers to transcend their own self-interests for the good of the organization (Bass, 1990). The leader's vision is put forward to inspire the followers to put their effort in achieving the goal (Lussier & Achua, 2010). Another definition by Van Linden and Fertman of transformational leaders is in the aspects of transforming people. They defined that transformational leaders are the leaders who can transform people from followers into leaders. (Van Linden & Fertman, 1998) The common characteristics of transformational leadership identified are influential, inspirational, intellectual stimulation, and individualization (Bass et al., 2003). It is argued that although transformational leadership encourage followers to be more innovative, however, future problems required the leaders who are also innovative.



And this implies that transformational leadership characteristics are not enough to achieve future organizational goal (Samad, 2011)

### **Entrepreneurial leadership**

Entrepreneurial leadership has been defined differently by different leadership scholars over time. Cunningham and Lischeron defined in 1991, that entrepreneurial leadership involves having clear goals, creating opportunities, empowering people, maintain organizational intimacy, and developing human resource system (Cunningham & Lischeron, 1991). Which is the definition that emphasizes on people and HR activities. But in 2006, Thornberry defined this phenomenon in business framework. He stated that entrepreneurial leadership is leadership that has mindset and skill set to identify, capture, and develop new business opportunities (Thornberry, 2006). The specific discipline of entrepreneurship is the focus on new venture creation, hence this latter definition of entrepreneurship or its synonyms give a direct impact and has been used widely among contemporary scholars. Such leadership aims to cultivate individual and teams to leverage their potential in creating opportunities for the organization. Entrepreneurial leadership is seen as critical element for the development of startups, a form of new venture (Yang et al., 2019)

### **About Innovative Leadership**

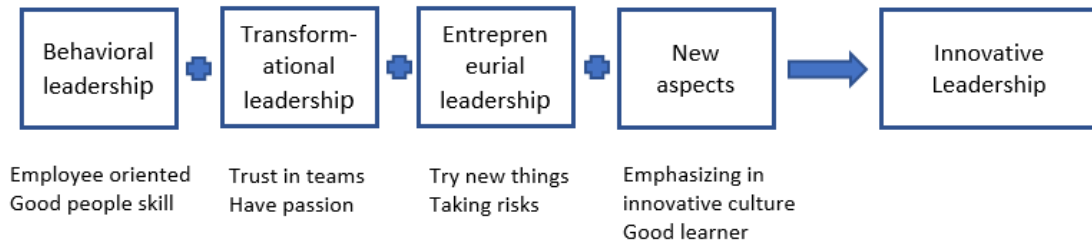
Innovative leadership is a relatively new construct in the leadership research, and the idea is still non-conclusive between different researchers (Sultana & Rahman, 2012). There are different explanations of innovative leadership as of dates. Adjei defined innovative leadership in an organization as a mixture of different leadership styles that effect the generation of imaginative thoughts, products, services and solutions, from the staff (Adjei, 2013). Innovative leadership creates team creativity and therefore increases higher performance of the team, especially with the influence of collaborative culture. This leadership style provides necessary properties to follow the development opportunities with future concerned and diversity approach (Jamshed, 2020).

Sen and Eren stated that in the uncertainty time of global changed in twenty-first century, innovative leadership practices provide changes that enable leaders to solve problems that have been long-time accumulated. They argued that Innovative leadership introduced something new to solve current problems that cannot be solve by contemporary leadership practices, and that innovative leadership satisfy people's needs at the present with a focus of on the future. Their study defined that the innovative leadership is a process of making radical changes through innovation to solve problems (Sen & Eren, 2012). This notion of innovative leadership style as an answer to global and business changes was also supported by Manula, Peric, and Vujic (2019). His qualitative study showed that innovative leaders lead teams with passion and purpose, have good relationships with stakeholders, are self-disciplined, and apply lifelong learning practice (Mamula et. al, 2019).

From the literature review, we can see that innovative leadership is a combination of behavioral leadership, transformational leadership, entrepreneurial leadership and more new

aspects of leadership qualities. Figure 1 showed the conceptual framework of innovative leadership and other leadership theories.

**FIGURE 1:** Conceptual framework of Innovative leadership



## RESEARCH QUESTION

The purpose of this qualitative research study is to understand the meaning of a central phenomenon of innovative leadership for the CEO and founders of startups and technology companies in Thailand. This study will have a central research question of “What is the qualities of innovative leadership?” Three semi-structured interview questions can be identified.

### Interview Questions

1. [Grand Tour Question] As a CEO (or xxx), what is your impression of leadership?
2. What about the word "innovative leadership", how would you explain or give meaning to it?
3. What is your experience(s) in regards to innovative leadership?

## METHODS

I use the research methodology approach of phenomenology in this study. Phenomenology focuses on exploring individuals’ lived experiences, to understand several individuals’ common or shared experiences of a phenomenon. It is an in-depth inquiry into topic with homogeneous participants. (Glesne, 2016). This methodology seeks to understand the deeper interpretation of the topic from each participant’s point of view, to examine similarities and differences across cases. According to Cresswell (2016), a phenomenological study explained the meaning of lived experienced of a concept or a phenomenon, for several individuals. “What” they experienced and “how” they experienced are descriptions to be studied. It is recommended that researchers interview from 5 individuals, or above, who have all experienced the same phenomenon. (Cresswell, 2016)

The method used was an in-depth, one-on-one, in-person, interview. The participants were purposefully selected by the criteria. The study focuses in Thailand startups or technology company eco-system, the criteria used are established startups' CEOs or founders of technology-based companies, whose companies have reputations in innovations by receiving innovation awards or investment. Five participants were contacted, and all accepted to join in the study. Four out of five, I know them personally. Another person is a snowball contact of his relative that I know. The five participants' profiles are shown in Table 1 below. To maintain their confidentiality, I used pseudonym names to identify them.

**TABLE 1.** Research participant profiles

| <b>Participants</b> | <b>Demographics</b>     | <b>Role(s)</b>                       | <b>Company / Product / Industry</b>                                                                                  |
|---------------------|-------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Joy</b>          | Female, age 20-30 years | CEO                                  | Established startup. Virtual conference platform. Digital industry.                                                  |
| <b>Joe</b>          | Male, age 40 – 50 years | Group CEO / Investor                 | South-east Asia established startup in 5 countries. Digital platform. Digital industry.                              |
| <b>James</b>        | Male, age 30 – 40 years | Founders / C-level / x-CEO/ Investor | Founders and investors of several startups. C-level and consultant in real-estate industry conglomerate.             |
| <b>Jason</b>        | Male, age 40 – 50 years | CEO                                  | Established startup of vertical indoor-farming. Agriculture and Digital.                                             |
| <b>Jeff</b>         | Male, age 50 – 60 years | Group CEO                            | Bio-technology companies with own brand. Company won National Innovation award in category “Innovative Organization” |

The interview questions are of semi-structure type. Each one-on-one interview lasted about 1 to 1.5 hours. Total hours of interview were about 7 hours. Often, I repeated or summarize the participant's answers with them to help in member-checking for the trustworthiness of data. The interviews were tape-recorded and later transcribed. Triangulation of the data analysis was also performed by my researcher colleagues on coding comparison.

### About Researcher

I am a female researcher. While doing this study, I am enrolling in a Ph.D. program in human resource development school of the National Institute of Development Administration (NIDA). I am also in a full-time employment as a deputy executive director of the National

Innovation Agency (NIA) of Thailand. My role in the agency is to oversee teams of strategy, foresight, IT and all supporting units of the organizations. In this current role, I am directly supervising HRD, HRM, and OD related functions. My educational background is in Electrical engineering of master and bachelor degrees from the USA.

I have developed my interest in leadership topic since many years back. It is of my own accord to try to be a better leader and also to build leadership and teamwork. It is to note that in the interview I realized that I might have a researcher impact on the study. Because of my role in current agency, the participants may be reluctant to deny my appointment. They can also give bias answers to some extent. However, because I had developed good rapport in each interview, together with the reactions of each interview that the participants relax and enjoy the moment, I think the answers of each participants are quite truthful and sincere.

## **FINDINGS AND DATA ANALYSIS**

Five interviewees were all very helpful and enthusiastic on the interviews. I adopted an inductive approach and thematic analysis. Each interview record was transcribed. The trustworthiness was done by triangulation from my colleague researchers to compared and check our data analysis together. After data analysis of all five transcripts, several themes of leadership qualities emerged. These findings direct toward the answer of the research question of this study.

### **Innovative leadership qualities**

When asked all the CEOs of their experiences of being innovative leaders, I could interpret many qualities or attributes that were coming out of each participant. Note that I will use the word qualities to cover all attributes, abilities, behaviors, and characters of the person. The participants' qualities can be depicted from the event and behaviors that they explained in their story. I also asked them of the characters or attributes that they think are made up of good innovative leader, either of themselves or of their team that they expected to have. Several attributes come up repeatedly. Data analysis method of content analysis by word frequency was used. The result showed in Table 2 below; where each group of attitude, skill, and behavior are showed for the top 5 qualities. The triangulation was performed by peer review of coding comparison.

**TABLE 2.** Innovative Leadership Qualities mentioned by participants

| <b>Qualities</b>                                                                                         | <b>Joy</b> | <b>Joe</b> | <b>James</b> | <b>Jason</b> | <b>Jeff</b> | <b>Total</b> |
|----------------------------------------------------------------------------------------------------------|------------|------------|--------------|--------------|-------------|--------------|
| <b>Attitudes</b>                                                                                         |            |            |              |              |             |              |
| 1. Believe in team (trust, teamwork, leader cannot do it alone)                                          | ////       | ////       | /            | ////         | ///         | <b>18</b>    |
| 2. Have passion (goal, hope, dream)                                                                      | //         | ////       | ///          | ///          | ///         | <b>16</b>    |
| 3. Believe in self (enough confidence, determination, perseverance)                                      | //         | //         | /            | /            | ////        | 10           |
| 4. Fail fast and get up faster (learn from mistake)                                                      | /          | //         | /            | //           | //          | 8            |
| 5. Humbleness (leader doesn't have to know it all, be a good follower)                                   | ///        | /          | //           | /            | /           | 8            |
| <b>Skills &amp; Abilities</b>                                                                            |            |            |              |              |             |              |
| 1. People skill (understand people individually, give importance to people, empathy)                     | ////////   | ////       | /            | //           | //          | <b>18</b>    |
| 2. Have knowledge related (Multi-disciplinary)                                                           | /          | ////       | ///          | /            | /           | 10           |
| 3. Communication skill (good story teller, presentation skill, good listener)                            | //         | ///        | //           | //           | /           | 10           |
| 4. Creativity (having new idea often)                                                                    | ///        | ///        | //           |              |             | 9            |
| 5. Ability to motivate others (convince, inspire)                                                        | //         | ///        | /            | /            | /           | 8            |
| <b>Behaviors</b>                                                                                         |            |            |              |              |             |              |
| 1. Try new things, even strange things (like to change, believe in improvement, don't accept status quo) | ////       | ///        | ////         | ////         | ///         | <b>22</b>    |
| 2. Build culture or eco-system for staff to share idea (be in good eco-system)                           | ////       | ////       | /            | ///          | //          | <b>18</b>    |
| 3. Break the rules (risk taking)                                                                         | //         | ///        | //           | //           | ///         | <b>12</b>    |
| 4. Love to learn (good learner)                                                                          | //         | ///        | //           | ///          | ///         | <b>13</b>    |
| 5. Have world view perspective (thinking outside-in, siege opportunity)                                  | ////       |            | /            | ///          |             | 11           |

From the list of innovative leadership qualities accumulated from all participants, I picked the first group of top qualities mentioned, that was repeated at least 12 times. These are the emerged themes from the data analysis. We can see that innovative leadership is the practice of 1.) trying new things and taking risk, 2.) building and trusting in people or team 3.) creating culture that support idea generation 4.) having good people skill 5.) having passion or a dream to be achieved, and 6.) being a good learner and love to learn.

With the theme of taking risk, innovative leadership must lead team to do new things and that is sometimes a risk-taking action. Joe, a CEO of established multi-national start-up, gave a metaphor of having to lead the team to do something that hasn't been done before;

*“At the time that I turned my company from SME style to a startup model. Seven years ago, no one understood what startup is. It's like, you (the leader) must jump from a stable slow-running boat to a new speedy boat. And you need to convince everyone to jump to the new boat with you. When the new boat cannot guarantee that it will not sink. But you try to convince everyone that if they come along, the new boat will have more speed and it'll reach the destination sooner. Maybe you don't know for 100 percent sure yourself, but you need to take that risk and to motivate everyone to go with you.”*

Besides the like of trying new things to create innovation, innovative leaders care much about people and teamwork, With the theme of trusting in people, Joy said;

*“If I would need to give value to the one thing, I'll choose to give emphasis on people. And we customize our management to each and individual staff, personalize our way for them.”*

Also, Jeff talked about the most important thing to him in managing his company, which is people.

*“At the end, it is all about people. How do we make them having the same growth mindset like us?”*

On creating and emphasizing in innovative culture that support idea generation, Joy said;

*“We encourage on new ideas generations. We went out on a hackathon outing for 2 days and 2 night to have only our staffs talking about new ideas. We tried to build environment also, that will support the innovativeness of staffs. What to do to help them be more creative. These includes the flexible time, the place to work, and others mechanism that that we can support. We asked questions with “why”, and we are happy when they tried to answers, because there is no right or wrong.”*

For the theme of good people skill, Jason, talked about running his company and his team of startup staffs. His people skill gets him through every day's tasks that must be done.

*“As a small company, I, a CEO, needed to be able to give good communication to all stakeholders, every day I'll go meet people. Either my own team in each location, or the partners and clients. Sometimes we talked about work, sometimes we talked about other things or personal things. And the relationship that last long helps with the business as well. I found new ideas and also solutions from the people I meet with”*

As for passion, James mentioned this reason as his motivation from the beginning of his journey.

*“I wanted to make an impact, to change the world. But changing the world may be of too big of a goal in the beginning, so I think starting my own company is a way to create impact and change the world.”*

As one example of quote, Joe talked about his opinion on the journey to become an innovative leadership. He reflected upon himself and also of his team member on the learning journey and the love-to-learn nature theme;

*“I think at first that person must be open-minded and reduce their ego, then there needs to be some space for him to shine. Once there’s a small success, it’ll make him proud. And he can build on that to a bigger challenge issue This person must accept own flaws and learn from that every time. That’s why it is not easy. Um.. It’s an art.”*

## DISCUSSION

The findings of this study answered the question of “What is the qualities of innovative leadership?” and arise the top theme qualities of innovative leadership. The essences of innovative leadership come from multiple aspects; experiences, background or history, and leadership qualities. According to Sen and Eren, innovative leadership have several qualities in common; such as knowledge, talents, values, skills to recognize the current problems and anticipate the future outlook (Sen & Eren, 2012). The findings coming out of this study in this regard showed all these qualities as well. However, with inductive approach of qualitative study, I found that there are quite significant themes of innovative leadership qualities that jumped out quite obvious in this study. In their stories risk-taking and doing something no one else dare-to-do-it were in top thing that was mentioned. The second ability that is notable is the ability to individualize people in the team, to give much important to develop and cater the care differently in each person. And third is the ability to cultivate innovative and idea-generation culture in the organization. Settings and environment are very important to all participants in order to create innovative spirit.

When compared the findings to what innovative leadership means as according to the literature’s definition. The result comes up in line with the literatures. Innovative leadership is a mixture of different leadership styles that effect the generation of imaginative thoughts, products, services and solutions, from the staff (Adjei, 2013). Moreover, innovative leadership provides necessary properties and cultivate a culture to follow the development opportunities with future concerned and diversity approach (Jamshed, 2020). The data of this study showed all these qualities of innovative leadership. The findings indicated that innovative leadership is a process of fostering innovation through developing innovation friendly culture and setting strategic direction that guide and build trust among the employees to innovate (Sultana & Rahman, 2012).

When I compared the findings of innovative leadership from this study to the theory of behavioral leadership theory, transformational leadership and entrepreneurial leadership. Innovative leaders care of the employee just the same as emphasized in behavioral leadership theory. Innovative leadership has the ability of transformational leadership in terms of com-

munication, inspirational, influential characters. These are the same qualities in both leaderships, in order to motivate the team or others to take actions. On comparison with entrepreneurial leadership in theory, innovative leadership is the same in terms of taking risk, creating opportunities and seeing the future. Nonetheless, from the study we found two more distinct qualities of innovative leadership that are not very evident in other theories; there are the fact of emphasizing in culture and the nature of love-to-learn behavior.

From the result, a model of innovative leadership can be depicted in Figure 2, where the most important qualities of innovative leadership are to take risk, trust in team, create innovative culture, have good people skill, have passion, and love to learn.

**FIGURE 2:** Model of Innovative leadership important qualities



It is noted that this research is only focus on leadership on CEO or top management level, and not including other level of leadership in the organization, such as manager, and staff level. The concept is better explained on the top management level of the company.

## LIMITATIONS

This study is a phenomenology of 5 participants. Although findings can be coded and patterned but the limited number of participants answered is still of concern. The limitation is in the time constrain, in which to have more participants join the study. Also, this limits the action of member checking on the transcripts. However, the triangulation was still performed to create trustworthiness of the study.



## **FURTHER RESEARCH**

It can be seen that there are several aspects of further studies that could be researched upon. Geographically, similar study of qualitative research can be done in other countries besides Thailand. This will elaborate on the styles, characters, and qualities that one becomes to gain innovative leadership within different context. Another aspect is on the types of innovative leadership, where the participants may come from other type of organizations or sectors to gain diverse viewpoints. Moreover, study can be done further on different level of leadership, not only on C-suite level. Quantitative research can also be further performed to see variables related in this phenomenon, in order to make explicit the significant antecedents of becoming innovative leadership.

## **CONCLUSIONS**

This study explored the phenomenon in regards to innovative leadership. To answer the question of what is the meaning of innovative leadership, a qualitative of phenomenology was used with in-depth interview methods. Five participants of CEO or founder roles joined in the study and gave one-on-one, in-person interviews. This study specifically explored leadership on C-suite or top management level. The findings showed that there are multiple aspects in becoming innovative leaders. Innovative leadership is a combination of different leadership theory styles, adding on more new aspects. Besides having deep passion, innovative leaders put the trust in their team and practice continuous learning. He or she must be an eager learner, with good people skill and emphasizing in building good innovative culture to be able to tackle the future problem with innovation. The notion of being an innovative leaders' lines in the experiences, background, abilities, and characters. In this new era, where innovative leadership is seen as a new hero to overcome challenges of disruptive world, HRD professionals and scholars must understand this phenomenon in order to design purposeful interventions.

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# **FULL-TIME MOTHERING: AN ONGOING PROCESS OF INFORMAL LEARNING**

by

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## **ABSTRACT**

In this fast-changing world, knowledge is increasing in lightning speed, formal learning alone can no longer fully support people reaching their life goals at different stages. To fill the voids, informal learning may benefit people through its versatile forms. Full-time mothers, which accounts for approximately 43% of women with children, are greatly benefited by informal learning in coping with disruptive changes, advancing mothering skills and capacity to get back to workforce. In this qualitative study, we explored informal learning behaviors of seven full-time mothers based on an international kindergarten in Thailand through in-depth interviews and observation. Analysis of gathered data presents informal learning patterns of three dimensions: full-time mothers' identity acceptance, full-time mothers as children-centered self-directed learners, and full-time mothers as collective learners. The findings suggest a guideline for full-time mothers to develop informal learning to advance their skills and capacities to return to workforce.

**KEY WORDS:** Informal learning, Disruptive change. Full-time mother, Identity acceptance Self-directed learner, Collective learner

## INTRODUCTION

Analysis from an UN Women and International Labor organization (ILO) report (2020) shows that prime-working-age women are least likely to be in labor force when they are living as part of a couple with young children (48.7 percent labor participation rate) and in extended-family households with young children (41.1 percent). Sandberg (2013) cited this statistic in her book *Lean in: Women, work, and the will to lead*, "43% of highly qualified women with children are leaving careers or off-ramping for a period of time." Among this 43 percent of women though, many have high intention to return to workforce (Light, 2018). It was stated by Datta (2018) that many countries, especially the developing ones, the social norms and traditions are still confining women at home, and it happens at my surroundings as well. This paper emerged from my intention to describe and reveal some parts of the real life of full-time mothers in Thailand to raise awareness about full-time mothers' life condition. From the pattern that emerged from this research, I would like to encourage people in a similar situation with or without the intention to return to workforce, to keep on learning and advancing. Therefore, is it worth noting that, organizations should be encouraged to recognize the value and the learning pattern of full-time mothers.

In this fast-changing world, King, K. P. (2010) pointed out knowledge is increasing in lightning speed, formal learning alone is not enough to meet people's lifelong learning needs because no one can enroll in formal classes at every new life stage and for every decision made. In the past two years the world has been encountered with extreme uncertainties, a report from McKinsey & Company (2020) illustrates that to cope with the radical changes, shifts in skills is needed by all. Full-time mothers especially, after a long detachment from formal organizations, are in great need to re-adapt and learn.

Numerous studies have been done on workplace informal learning but ignoring homeplace as an important learning site, even though home as a learning site, is significantly important to most of adult learners, especially for women, however, study about how full-time mothers conduct informal learning is very few (Gouthro, 2005; Liu 2007). Head, J. et al. (2015) describes informal learning as incidental and self-directed, in which individuals learn independently to advance their knowledge and skills. Given the home-based lifestyle, and children-centered time schedule, informal learning is deemed to be a good fit for full-time mothers. Watkins et al. (2018) pointed out that informal learning can be resulted by significant disruptive changes. Becoming a mother can be a significant disruptive change, and one of the most stressful experiences in one's life, both physically and mentally (Gibson, & Hanson, 2013). Motherhood is always associated with uncertainty, some even had to forego careers, that makes the change coping harder. In this study, we interviewed and observed seven full-time mothers, to see how they have been coping with the changes by learning through life.

## RESEARCH QUESTION AND PURPOSES

The purpose of this qualitative study is to explore and describe informal learning behavior of full-time mothers with young children, in the context of Thailand. Full-time mothers participated in this study are based on one of the best kindergartens in Bangkok. The group of participants was formed naturally because their kids' study on the same campus. There is limited qualitative research examines informal learning, and almost none in the field of full-time mothers' informal learning (Liu 2007). This study aims to address this gap. This study is driven by the following research question:

*How do full-time mothers with young children establish informal learnings?*

## LITERATURE REVIEW AND FRAMEWORK

### Informal learning

Upon an assumption of the view of the nature of knowledge, Burrell and Morgan (1985) brought the discussion that there are generally two types of knowledges "one is hard, real and capable of being transmitted in tangible form; the other is softer, more subjective, spiritual or even transcendental, based on experience and insight of a unique and essentially personal nature". In the context of informal learning, meaning making in a central way is "to understand our feeling, to weave ideas into meaningful patterns, and to really understand something" (Merriam & Caffarella, 1998), which can be largely related to the softer kind of knowledge that is based on experience and personal nature.

Research by Watkins et al. (2018) quoted study from 1926 by Eduard Lindemann, that the chief purpose of informal learning is to discover the meaning of experience, it was also acknowledged that social or interpersonal context is very important for meaning making and problem-solving. In a meta-analysis research conducted by Cerasoli et al. (2017), it was pointed out that usage of formal and informal learning can be confused with the behaviors that result in the learning gains, therefore, they proposed a definition that focused on the behaviors: "informal learning behaviors are non-curricular behaviors and activities pursued in service of knowledge and skill acquisition that take place outside formally-designated learning contexts. Such activities are predominantly self-directed, intentional, and field-based. Informal learning behaviors are not syllabus-based, discrete, or linear".

There are generally three learning settings: formal, nonformal and informal learning, informal learning is "one of the most difficult to capture and understand" but embedded in people's everyday life (Merriam & Bierema, 2013). Informal learning is more and more recognized as it is evidential that most leaning does not occur in formal situations (Park & Choi, 2016). Examples of informal learning include talking and sharing ideas, no-the-job training, networking, coaching, mentoring, special projects, talking with others, and collaborating (Park & Choi, 2016). Informal learning refers to, "the experiences of everyday living from which we learn something" (Merriam & Caffarella, 1998). Merriam and Cafferella (1998) adopted ideas from Livingstone and Scholtz and summarized it: there are

generally two types of informal learning, the first is informal education or training that may be spontaneous or planned, it also can be referred to social learning; the second is non-taught, self-directed or collective informal learning, they emphasized that for adults, informal learning continues to be the most important learning to deal with the changing environment.

Ereut (2004) defined informal learning as learning that comes closer to the informal end than the formal end of a continuum. Characteristics of informal end of the continuum of formality include implicit, unintended, opportunistic and unistructural learning and the absence of a teacher. His S. (2015) defined the characteristics of informal learning as fluid in activity and interactions, multigenerational, and even friendship-driven, and the learners is often in charge of selecting the activities, location, and coparticipants in the learning situation. Studies suggested engaging in informal learning behavior will benefit the people who do it, and hence, it will correlate positively with important outcomes (Wolfson et al., 2018).

### **Full-time mother**

The discourse of full-time mother from Ranson (1999) has very much informed the understanding and description of mothering from my interview of mothers and from my own experiences “mothering, particularly when children are very young, is in fact a full-time job. “full-time” interpreted by Ranson (1999) refers to both ideal and practice, it can be regarded as the way time spent, or not spent, and the subject “mother” is used to shape, or judge, mothers’ practices. The belief is that the best childcare is exclusively maternal, and that mothers are obligated to supply it on an ongoing basis.” Furthermore, “home-based full-time mother” was used to describe women who have chosen to forego formal, regular paid work, either full- or part-time, with one employer, in order to stay at home to care for pre-school children, however, full-time mothers are not always doing mothering, some also do home-based work (Ranson, 1999).

These terms can be related to “intensive mothering” from Hays (1996) which argued that the ideology holds the individual mother primarily responsible for child rearing and dictates that the process is to be child-centered, expert-guided, emotionally absorbing, labor-intensive, and financially expensive. Burrell and Morgan (1985) identified five themes of household work from data analysis: a) “I didn’t take a course for anything”: informal learning; b) “it’s just through experience”: experiential learning; c) “I leaned because I was very frustrated”: self-directed learning; d) “I just know it”: tacit learning; e) “I didn’t give up”: using multiple methods.

In the context of Thailand, the largest percentage of work status for married women are unpaid family workers (Liao & Paweenawat, 2021). There is evidence suggesting that stereotyping of gender roles still exist (Yukongdi, 2005). With this regional influence, full-time mother is considered as a normal role in Thailand. However, after the children get older, many full-time mothers will return to workforce. While mothers getting ready to re-join the work force, there are more organizations now becoming more working mother and family friendly, for example Microsoft Thailand, who recently increased paid maternity

leaves from 12 to 20 weeks and paternity leave from three days to six weeks, also fully paid (Shield GEO Services Ltd, 2020). As national policy, the maternity leave entitlement in Thailand was expanded in 2019 from 90 to 98 days of paid maternity leave. Organizations are now more open to working mothers can be a sign that full-time mothers can be good human recourses for organizations.

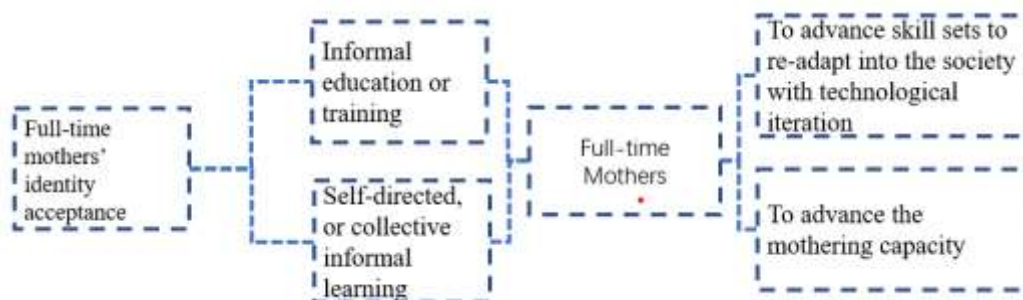
## Framework

Relating the philosophies and beliefs by the Satir's Model, the foundation of personal growth starts with individual hope, acceptance, and self-worth (Wretman, 2015). Wretman (2015) also articulated the model of Satir, that resistance and chaos is one part of the change process and growth, at this stage people experiencing the movement from the comfortable to the unknown.

In the study by Watkins et al. (2018), it was pointed out that informal learning can be resulted by significant disruption. Becoming a mother can be one of the most significant disruption and stressful experiences in one's life, both physically and mentally (Gibson, & Hanson, 2013). Therefore, constant learning will be required for mothers. Relating to the Satir's philosophy, it means a movement from comfortable to unknown, it is categorized in the stage of chaos, which is a part of the change process. However, acceptance of one's new identity, as illustrated in the Satir's model, can be the beginning of the personal growth, it helps people to open for new discoveries and understandings, where the learning begins to happen.

A global human capital trends survey conducted by Deloitte (2019), believe that people must reinvent their ability to learn. Giving the flexibility of informal learning, it continues to be the most important way to deal with the changing environment (Livingstone & Scholtz 2006). In addition, in the context of fulltime mothering and household work, learning is largely informal and starts with an experience, the learning process is self-initiated and most often self-directed (Burrell & Morgan, 1985).

**FIGURE 1:** Informal learning framework of full-time mothers





Overall, personal growth for full-time mothers may start from the acceptance of new identity, with the openness for discoveries and understanding more, informal learning can work as an essential learning method for full-time mothers, through both informal education or training, and self-directed or collective learning. It can benefit full-time mothers in two essential ways: first is to advance their personal capacities to prepare them to rejoin the workforce; the second is to advance their mothering capacities through day-to-day practices and experiences.

## METHODOLOGY AND METHODS

As one of the most often used approach in anthropology, ethnography deemed to be a good fit for this study. The major foci of ethnography are to describe and interpret patterns of behavior and culture (Glesne, 2014; Creswell, J. W. 2006, p. 88). As mentioned before, the purpose of this study is to interpret how the behavior of informal learning is conducted by full-time mothers in Thailand, therefore, the study fulfills the main foci of ethnography in both behavior and culture sections. Connections with full-time mothers will be helped by the researcher being a mother herself, thus gaining acceptance and access to this community was easier. The methods of this study included participants observation and in-depth interviews with seven full-time mothers.

**TABLE 1.** General information of participants

|           | Age | Language                  | No. of kids | General background, time of full-time mothering, and length of work experience                                  |
|-----------|-----|---------------------------|-------------|-----------------------------------------------------------------------------------------------------------------|
| <b>A</b>  | 43  | Eng. Thai                 | 2           | Masters' degree from UK, 15 years work experience in consultant industry, being fulltime mother for 5 years     |
| <b>B</b>  | 41  | Chi. Eng. Thai. Jap. Fra. | 2           | Double bachelors in art and language from Canada, 8 years work with family, being full-time mother for 7 years. |
| <b>C</b>  | 36  | Eng. Thai                 | 3           | Masters in Economics from UK, 4 years work experience in bank, being fulltime mother for 6 years.               |
| <b>D</b>  | 40  | Chi. Eng. Thai.           | 2           | Masters in accounting from China, 11 years work experience with fam, being full-time mother for 4 years.        |
| <b>E</b>  | 41  | Chi. Jan. Eng.            | 1           | Masters in accounting from HK, 8 years work in Japan, being fulltime mother for 4 years                         |
| <b>F</b>  | 42  | Jan. Eng. Chi.            | 1           | Master in Finance from US. 12 years work in US and Thailand, being fulltime mother for 3 years.                 |
| <b>G</b>  | 40  | Burmese, Eng.             | 1           | Bachelor in BA from UK, family business for over 15 years, being fulltime mother for 1 year.                    |
| <b>ME</b> | 34  | Chi. Eng.                 | 1           | Masters in Management from Thailand, 5 years work in Uni in China, being fulltime mother for 4 years.           |

In order to create a relatively thick description within a given period of time, extra sufficient participant observation was carried out. Easterby-Smith et al. (1991) identified four types of participants observation roles. In this study, I, as a member of the participants group, carried out the observer role in between “researcher as employee” and “interrupted involvement”. Even though it was not taking place in an organization, “research as employee” can still be used for its way of observation: fully experience the work while over-

serving. Being able to immersively experience the role of a full-time mother within this mother group gave me the privilege of getting in-depth information from more angles that are relevant to the study, however, I have been constantly reminding myself the ideology of “reflexivity”, which refers to the awareness of how researcher, researcher participants, setting, and research procedures interact and influence each other (Glesne, 2006). Therefore, the “interrupted involvement” was carried out together with “researcher as employee” to allow me to stand in a longer distance to watch and get a more wholistic picture of the research target.

The process of interview design, piloting, revising, and transcription mainly followed the Glesne (2016) procedure, and took references to the interview protocol framework of Castillo-Montoya (2016), with inspiration from the interview questions of (Glesne, 2016, p. 108) and (Schürmann & Beusaert, 2016, p. 137-138) I carefully drafted of the interview protocol of this study (see Appendix for full interview protocol). After consulting professors of the area, questions were revised and piloted with Ph.D. scholars and potential interviewees, then questions were revised again to be more verbal friendly. After the first two interview, questions were revised for a third time to be more open, and more probing was added on the following interviews. The type of interviews carried out for this study were between semi-structured interview and conversational interview.

The main phase of the participant observation and in-depth interview were during the first and second term of 2020-2021 of the kindergarten. Each interview took approximately one and half to two hours, permissions of recording were asked, during the interviews, both recording and google doc voice typing were used to ensure no content lost. All interviews were transcribed anonymously to keep the confidentiality of interviewees. It was also stressed to all participants that all content revealed can be removed by requirement.

During data analysis, criterion for improving trustworthiness of the study were used, for example: 1) prolonged observation and interviews; 2) triangulation in data-collection methods, except interview, observation, I also had plentiful literature reviews on the related subject in order to have multiple perspectives for data analysis; 3) member checking, interview transcripts and final drafts were shared with interviewees to this study for gaining feedback, approvals, and confirmed that the words were reflective of their minds; 4) clarification of researcher bias and subjectivity, during interview, observation, and data analysis, reflexivity and subjectivity were constantly reflected on to improve the credibility and validity of this study.

Through systematic data analysis, three themes were generated from coding and categorization: full-time mothers’ identity acceptance, full-time mothers as children-centered self-directed learners, and full-time mothers as collective learners.

### **Full-time mothers’ identity acceptance: the beginning of new learnings**

The average age of the mothers participated in this research is 39-year-old, the earliest age of a member becoming a mother was at 30 years old, all participants have had work experiences before becoming a mother. The similarity of age and international background let

this group of people share similar values and behaviors in many things including raising children. In this study, all participants shared experiences about encountering a certain level of change-resistance and chaos at the beginning stage of becoming full-time mothers. Giving away the familiar working identities and receiving new identity as full-time mothers can be struggling and fearful. According to the coding and theming of data collected, “acceptance” stood out as a changing point for all the interviewees. Take A for example, foregoing her beloved career was not an easy decision to make:

*“I’m Thai and I used to be a fulltime working woman, and then became a full-time mommy. My career lasted for 15 years before becoming a mother. I did try maintaining the partnership with my company, I even went back to work after like 3 months my first kids was born, and then 6 months along the way, I knew it wasn’t working...I had to do it myself.”*

B and F had struggles leaving works too, and it took a long time for them to get used to the status of full-time mothers:

*“For me I thought I can do parttime work with my family business, but after I had kids, I felt like it’s impossible for me to do outside job and take care of the house and the kids all the same time. It’s too much, so I need to just accept the reality and give up one of the priorities.”*

*“I struggled for quite a while until I talked to my best friend in Japan. She said it is all in our minds, we look at this as a “struggle” or we can look at this as a “privilege”, once we start to accept, it will change the whole experience to positivity.”*

The word “acceptance” was mentioned many times by my interviewees, whether planned or not, when the change of turning to be a mother happened, all my interviewees had certain level of difficulty shifting the identity. Becoming a mother can be an extremely disruption for people to build a whole new life around it, foregoing careers make it even harder. Relating to the Satir model, the shifting point followed by resistance and struggle is adapting and accepting. Full-time mothers in this study unlearned their old routines and identities to get into new routines and identities. Some experienced depression caused by mental stress and physical illness, as both in literature and in practice that full-time mothering is a labor-intensive work, it is twenty-four hour on-call once a baby is delivered. At this point, acceptance of new reality is deemed to make things easier, and hence, they can open themselves for new learnings. In general, acceptance of the identity of “full-time mother” is the beginning of opening for new learnings.

### **Full-time mothers as children-centered self-directed learners: an on-going process of learning**

Informal learning is mostly experiential, as Marsick and Watkins (1990) pointed out that “individual largely learn from their experiences, and informal learning occurs while it is needed, and when there is motivation and opportunity for learning” (Watkins et al., 2018). Depending on the needs of each interviewee, there are generally two types of learning emerged from the data analysis: mothering informal learning as a common need, and per-

sonal growth-related learning, which may lead to future work plans. The fact that babies and young children require intensive cares, makes the time plans for full-times mothers unintentionally centered on the kids right after they are becoming mothers:

*“I have to learn everything new. To be a mother, I have to forget about who I am. And re-learn everything and it was very tough for me, in a sense that I came from a position that I felt very in control of everything. But when you have to switch to become a fulltime mother, the most difficult things for me: first is that I didn’t have any mother skills, there is no parenting or mother school when we were young, so you learn everything new, and then I doubted every single thing I did and also with that stress you had to rely on other people on financial and for me that's very stressful as well.”*

My interviewees mentioned “to forget about ourselves”, or “learn everything new” many times. They realized to raise a kid is a fundamental project that needs new knowledge everyday:

*“Every decision I make depends on my child, right, I think the benefit of having a mommy all the time there especially when they are young is very important. When your child feel like this world is welcoming, they feel safe and feel like there is nothing for them to fear, they learn to trust the world, and when they trust the world, they learn to approach the learning in a positive way.”*

*“For example, how to breastfeed, how to make milk come, how to take care of the newborn, even how to make food for little kid, and how to prepare food to go out, how to put them to sleep, or even all the medication for kids...new things all the time! we learn about life, again!”*

We learn life again when we become mothers. It is an on-going process, and mostly through experience, Livingstone and Scholtz (2006) mentioned that learning through experience is the core of informal adult learning. Sometimes it comes from the smallest things. However, just like all other informal learnings, most of the time it is ignored or considered as “just a part of life”. Through the data analysis, another informal learning behavior was found, that is learning for personal growth, which may prepare the mothers to go back to the work force and turn them into working mothers.

*“I am lucky I live with my own parents, they help me to care for my kids, so that at night I can have time to do online courses of stock market, I think I will go back to the bank work after they are elder.”*

*“I like to join workshops, from cooking to serious management training, whenever I am available, I am learning, I also want to be an entrepreneur in the future, I am planning to open a multifunctional space...”*

Even though full-time mothers build the life around children, it is still possible for them to make time to learn for personal growth, which will become the base of skills and knowledge that can be transferred to work in the future. As mentioned, that all participants

have had work experiences before becoming a mother, many still want to rejoin the workforce when time allows. Therefore, personal growth learning has been embedded in the life. In general, building a child-centered life requires constant informal learning both in mothering skills, and personal growth learning that relates to future work plans.

### **Full-time mothers as collective learners**

“Collective learners” came out as a theme from my data analysis. Firstly, collective learning as a family-based learner, and then, secondly, collective learning as a social-based learner. During literature review about full-time mother, there was discussion about the differences between actual practice and terminology of “full-time” and “mother.” Ranson G. (1999) argued that the term “full-time mothering” offers the expectation of exclusive and on-going maternal care, but exclusive maternal care is not always what on offer. “Full-time mothering serves to the structure and organize women’s days in particular way, but it does not mean that what they are doing full-timely is mothering”. For instance, mothers live with extended-family household might have duties to manage family properties and care for the elderly (UN Women & ILO, 2020). The family base and social context of fulltime mothers creates an environment for the mothers to learn collectively.

“House manager” was a term A used to describe her role at home, she mentioned:

*“Even through what we are managing at home is just few people, the rewarding can be so rich and heart filling. I don't know about other people, but for me this is a general expectation from me and my husband, that I am the house manager, and I also take care of the kids, like from their well-being to education, everything. And it is also about the day-to-day operation of the household, I help things like taking care of my husband's parents in certain aspects, or my own family. I think my husband he really trusts my capability as a mom and a household management, he basically leaves everything up to me...”*

Cooperating with partners to maintain the family function is the essential work a house manager needs to do. It is normal that full-time mothers being given a lot of expectations from the rest of the family members. Better cooperation with partners, can make it easier, however, good cooperation takes learning and practicing through day-to-day life.

Family is the smallest social unit that most people grew up from, to maintain good performance of these small units would benefit not only individuals, but also the bigger community. Before me and my interviewees met as a group, we functioned separately in our own lives, it was hard for us to anchor where exactly we were, since we were full-time mothers without an official organization. After we met, firstly as mothers of kids from the same school, we shared not only similar background, the same time schedule, but also the interests and the learnings from each other’s experiences. Then, we bounded as a mommy friends’ group.

Great learning started to happen, three morning group meetings by 7 interviewees were observed and noted by me, through my observation of this group of friends, positive outcome from the interactions were found: 1) useful information and connections were

shared; 2) thoughts and emotions were exchanged and heard, a certain level of mentoring were demonstrated; 3) feedbacks were given from our previous group cooking class workshop; 4) a network among a group of mothers was built. This study was greatly supported by all their openness and allowing me taking notes during meetups.

Merriam and Bierema (2013) pointed out in social cognitive theory that “learning is social and context bound”. To summarize the collective learning from the participants, there are two dimensions: one is the small family-based collective learning, to be a house manager and keep the household functioning well; the other is the friends’ collective learning, through which they share experiences and learn from each other, and then networks can be built for more learning, in turn it can positively support the family growth.

## **DISCUSSION AND IMPLICATION**

Formal learnings may bring us certificates and diplomas, but the learning about life and learning to cope with change, mostly is tacit, and comes in an informal way that easily being ignored or unrecognized. From the analysis of gathered data, the informal learning behaviors of seven full-time mothers based on an international kindergarten in Thailand were synthesized into a pattern of three dimensions: firstly, full-time mothers’ identity acceptance, while a change as becoming a mother can be extremely disruptive for people to build a whole new life around it, foregoing careers make it even harder. Relating to the Satir model (Wretman, 2015), the shifting point followed by resistance and struggle is adapting and accepting. Acceptance of new identity is deemed to be helpful for full-time mothers to open themselves for new learnings and make full-time mothering easier. Secondly, full-time mothers as children-centered self-directed learners, mothers learn new things daily while accompany the children’s growth, it is an on-going process, and mostly through experience. In addition, full-time mothers also make time to learn for personal growth, which will become the base of skills and knowledge that can be transferred to work in the future. Thirdly, full-time mothers as collective learners, Merriam and Bierema (2013) pointed out that “learning is social, and context bound”, people learn in social context through observing others, they acquire “knowledge, rules, skills, strategies, beliefs, and attitudes”. There are two collective informal learning patterns emerged from my study: one is the small family-based collective learning, to be a house manager and keep the household functioning well; the other is social learning presented as friends’ based collective learning, through which they share experiences and learn from each other, networks hence being built for more learnings, in turn it can positively support the family growth.

From the pattern that emerged from this research, I would like to encourage people in a similar situation to keep on learning and developing, by firstly accepting the new full-time mother identity, and open to new learnings and discoveries; through an on-going children-centered self-directed learning, mothers will reach a new level of mothering skills and personal-growth that prepares them for rejoin the workforce in the future; finally, by learning collectively with family members and friends, mothers will keep the family growing, and build an informal learning network to extend their knowledge and skill set.

A key issue relates to effectiveness of informal learning by full-time mothers is the degree to which transfer of learning can be applied to increase individual proficiency in future work, or the generalization of acquired knowledge to a wide scenario. It was stated by researchers (Enos et al., 2003; Gick & Holyoak, 1983) that transfer of learning happens when strong links between problem types and specific solutions exist, and a well-organized knowledge base (also known as schemas) would strengthen these links. In addition, Enos et al. (2003) stated that skills learned informally are likely to share similar features in terms of transfer tasks. If we compare informal learning at workplace with informal learning at live context, similar forms of learning reveal: “self-directed, networking, coaching, mentoring, performance planning, trial-and-error” and so on (Marsick & Watkins, 1992). Therefore, informal learning conducted by full-time mothers would benefit the transfer of learning to future work scenario through 1) strengthen the knowledge base, mainly by purposeful self-directed learning; and 2) similar informal learning forms.

In the future research, a bigger sample size and mixed research method can be used, or longitudinal research can also be conducted to follow the participants’ development and transaction to be working mothers, and how it affects their behavior, decision making, work, work-life relation, and so on. In addition, more informal learning patterns can be studied based on new informal learning behaviors. Over the last two decades, the global female labor force participation rate has declined from 51.3% in 1998 to 48.5% in 2018, and it was predicted that in 2030 the rate will reach a low of 45.9% (Verick, 2018). Conducting effective informal learning will benefit both the researchers and practitioners, firstly, it will extend the research boundary of informal learning; secondly, it will provide new informal learning patterns for full-time mothers to use as guideline to grow and advance their capacity to go back to the workforce, the meanwhile should organizations be encouraged to recognize the value and pattern of learning by full-time mothers and make use of it.

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## APPENDIX

| Research ques-<br>tions#1:                                                     | Back-<br>ground<br>infor-<br>mation :                                                                                                       | General questions&<br>mothering skills:                                                                                                                                                                                                                                                                                                                                                                                                                                 | Examples of IL for per-<br>sonal growth:                                                                                                                                                                                                                                                                                                                               | Social learning:                                                                                                                               | Extra ques-<br>tions:                                                                                                                                                                                 |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| How do full-time mothers with young children establish informal learning (IL)? | Age, gender, education background, Family dynamic: how many kids you have? years of marriage and motherhood, years of being fulltime mother | 1. How would you describe being a fulltime mother?<br>2.What kinds of new knowledge or skills did you need to learn after becoming a mother?<br>And: How do you learn things since you become a mother? Was it different from before?<br>3.What do you do when you are confronted with something you do not know? Can you give examples?<br>4.How do you exchange information with people in your life? (through what channel/form? Which ones do you prefer the most?) | 1.Are you a part of a learning or knowledge network? Does it make you learn? How especially?<br>2.what activities have influenced your life quality since you become a fulltime mother?<br>Is (informal) learning a part of it? How?<br>--Name 2 that you continue routinely<br>3.Why did each IL first begin?<br>4.Is there any long-term plan you have for yourself? | 1.Are you a part of any social network? If yes please describe the activities you do together.<br>2.Can you relate the activities to learning? | 1.What has been the most significant learning experience that you have had after becoming a fulltime mother?<br>2.If you could change one thing to make it easier for you to learn, what would it be? |

**ADVERTISING APPEALS AND ADVERTISING EXECUTIONS OF COSMETIC  
TELEVISION COMMERCIALS AIRED IN CHINA: CONTENT ANALYSIS  
OF 12 COSMETIC BRANDS<sup>8</sup>**

by

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**ABSTRACT**

This research examines the core advertising appeals and advertising executions used in cosmetic television commercials that were aired in China between 2009 and 2019. Driven by the theoretical framework of advertising appeals and advertising executions by Belch and Belch (2003), a content analysis of 60 cosmetic television commercials from 12 brands which belonged to different cosmetic brand segments (high-end, middle-end, and low-end) was conducted. As this study is of an exploratory nature, descriptive statistics were used for data analysis. The findings show that emotional appeals and testimonial executions were dominant strategies used in the commercials. Commercials by high-end and middle-end brands greatly relied on emotional appeals while commercials by low-end brands typically used rational appeals executions. Testimonial executions were more observed in commercials by high-end and low-end brands. Imagery executions were more used in commercials by high-end and middle-end brands. Regarding commercials by international brands, global standardized strategies were more used than localized strategies. The results of this study could reflect China's advertising industries in this period.

**KEY WORDS:** Advertising appeals, Advertising executions, China, Localization, Standardization

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<sup>8</sup> This article is an abridged and updated version of a thesis/ independent study submitted to Bangkok University.

## INTRODUCTION

China is the second largest cosmetic consuming country after the United States, regarding revenue and consumption (Ridder, 2020). While the United States generated US\$ 89.5 billion revenue from cosmetics, fragrances, and personal care products worldwide, China's revenue was valued at US\$ 62 billion in 2018 (Ridder, 2020). Factors driving the rapid growth of cosmetic markets in China included a growing of female population, rapid urbanization, and escalating number of social media users (Blazyte, 2020; Research and Markets, 2021). Modern-city women have shown strong consumption power and potential (Gao, 2012). Female images are usually presented through all types of media outlets, including cosmetic television commercials ("Fresh-faced and 16," 2005). The advertised products include fragrances, skin care products, color cosmetic, hair care products, and hygiene products (Goldstein Market Intelligence, 2018).

The current research, to the knowledge of the authors, is the first study that focused on the analysis of advertising messages in cosmetic television commercials in China. In recent years, extant research discussed various aspects of television commercials in China. For instance, a comparative study of creativity strategy used in China and Western countries (Guo et al., 2013), narrative structure of television commercials (Xu, 2013), and aesthetic perspective of Chinese contemporary commercials from 1979 -2015 (Qu, 2016). None of the previous studies explored advertising messages in television commercials.

Moreover, past studies exploring message strategies of advertising in China focused on only advertising appeals. For example, Guo et al. (2015) found that rational appeals are more likely to increase consumers' purchase intention when it comes to utilitarian products and the product involvement is relatively high. In contrast, emotional appeals tend to better affect consumer's purchase intention for hedonic products which have the lower degree of product involvement. Huang (2021) found that emotional appeals are used to build brand image and sell products, regarding advertising appeals in cosmetic short videos on Weibo. In particular, women are more easily affected by emotional factors, compared with men.

This study makes an important contribution to the limited existing research by providing a more comprehensive understanding of the relationship among variables, such as, advertising appeals, advertising executions, brand segments, localization, and standardization, in the context of cosmetic television commercials. This research expanded the framework by Belch and Belch (2003) to shed light on the core advertising appeals and executions used by Chinese and non-Chinese cosmetic brands from different segments of the cosmetic industry markets in China (Yang, 2011). This research is of exploratory nature: it explains the 10-year trends of advertising strategies used in cosmetic television commercials between 2009 and 2019. A content analysis on 60 cosmetic television commercials was conducted to respond to the five research questions:

RQ1 What advertising appeals are most frequently used in cosmetic television commercials?

RQ2: What advertising executions are most frequently used in cosmetic television commercials?

RQ3: Do cosmetic brands from different segments (high-end, middle-end, and low-end) tend to use different advertising appeals in cosmetic television commercials?

RQ4: Do cosmetic brands from different segments (high-end, middle-end, and low-end) tend to use different advertising executions in cosmetic television commercials?

RQ5: Regarding television commercials by international brands, what advertising executions are most frequently used in the commercials with global standardized strategies vs localized strategies?

## LITERATURE REVIEW

The message strategies encompass both the objectives and the methods of achieving advertising goals. It refers to what an advertising message communicates to the target audience (Belch & Belch, 2003) and the manner in which the advertising message is communicated to the target audience (Belch & Belch, 2003; Wells et al., 2006).

### Advertising Appeals

Advertising appeals refer to “the approach used to attract the attention of consumers and/or to influence their feelings toward the product, service, or cause” (Belch & Belch, 2003, p. 266). They inspire consumers’ hidden demand through advertising appeals, and translates the hidden demand into the final purchase behavior (He & Qu, 2018). At the broadest level, advertising appeals are divided into two categories, as discussed in Table 1: 1. *Rational/Informational appeals* attract the attention of consumers by emphasizing actualities and appealing to consumers’ utilitarian need for the product or service (Belch & Belch, 2003). Rational appeals could be identified by one of the following categories: competitive advantage appeal, feature appeal, news appeal, product/service popularity appeal, and favorable price appeal (Belch & Belch, 2003). 2. *Emotional appeals* influence consumers by relating to consumers’ social and/psychological need for the product or service. The message that uses the appeals tends to persuade consumers by appealing to their emotions rather than the product or service’s attribute (Belch & Belch, 2003). At the broadest level, emotional appeals can be divided into two groups: personal states or feelings and social-based feelings (Belch & Belch, 2003).

**TABLE 1.** Description of Advertising Appeals.

| No. | Types                        | Description                                                                                                                                                                                                                                                                                                                                                                                    |
|-----|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Rational/Information Appeals | Rational/Informational appeals attract the attention of consumers by emphasizing actualities and appealing to consumers’ utilitarian need for the product or service. Rational appeals could be identified by one of the following categories: competitive advantage appeal, feature appeal, news appeal, product/service popularity appeal, and favorable price appeal (Belch & Belch, 2003). |
| 2.  | Emotional Appeals            | Emotional appeals influence consumers by relating to consumers’ social and/psychological need for the product or service. Emotional appeals can be divided into two groups: personal states or feelings and social-based feelings (Belch & Belch, 2003).                                                                                                                                       |

## Advertising Executions

The framework of executions is understood as “advertising executions” (Belch & Belch, 2003, p. 266), “message approach” (Wells et al., 2006, p. 344), and “execution framework” (Ouwensloot & Duncan, p. 178). All of which refers to how the advertising message is communicated to the target audience (Belch & Belch, 2003; Wells et al., 2006). Advertising executions refer to “the manner in which an advertising appeal is used to communicate with the audience. Advertising appeals are used to elicit a response from the audience” (Belch & Belch, 2003, p. 267). Execution is the way an advertising appeal is presented, and a variety of execution styles can carry out particular appeals (Belch & Belch, 2003). Belch and Belch (2003, p. 275), Ouwensloot and Duncan (2008, p.178), and Wells et al. (2006, p. 344) agree on several common advertising executions, such as, *straight sell*, *demonstrations*, *comparison*, *testimonial*, *slice of life*, and *humor*. Belch and Belch (2003)’s framework refers to the aforementioned advertising executions and another five executions which are *scientific/technical evidence*, *animation*, *personality symbol*, *imagery*, and *dramatization*. Table 2 provides the description of 11 advertising executions proposed by Belch and Belch (2003). Table 2.

**TABLE 2.** Description of Advertising Executions.

| No. | Types                          | Description                                                                                                                                                                                        |
|-----|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.  | Straight Sell                  | Straight-sell executions relies on a straightforward presentation of information concerning a product/service (Belch & Belch, 2003, 276).                                                          |
| 2.  | Scientific/ Technical Evidence | Advertisers often cite technical information, results of scientific or laboratory studies, or endorsements by agencies to support their advertising claims (Belch & Belch, 2003, p. 277).          |
| 3.  | Demonstration                  | Demonstration is designed to demonstrate the key advantages of the product by showing it in actual use (Belch & Belch, 2003, p. 277).                                                              |
| 4.  | Comparison                     | Comparison executions offer a direct way of showing a brand’s unique advantage over its competitors or positioning a new brand with industry leaders (Belch & Belch, 2003, p. 277).                |
| 5.  | Testimonial                    | In testimonial advertisements, a person will praise the product on the basis of his personal experience with it (Belch & Belch, 2003, p. 277).                                                     |
| 6.  | Slice of life                  | Slice of life executions use problem/solution approach, which presents a situation which may occur in daily life, and then, can be solved by using the product (Belch & Belch, 2003, p. 277).      |
| 7.  | Animation                      | Animation executions refer to the executions that rely on various animated characters. Cartoons, puppets, illustrations or similar fictional creations are included (Belch & Belch, 2003, p. 277). |



**TABLE 2.** (Continued)

| No. | Types              | Description                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8.  | Personality symbol | Personality symbol executions refer to the executions that create a central character or personality symbol that can deliver the advertising message and with which the brand can be identified (Belch & Belch, 2003, p. 277).                                                                                                                                                                                 |
| 9.  | Imagery            | Imagery executions consist of primary visual elements like pictures, illustrations, and symbols rather than product information. They may be based on the usage imagery by showing how the product is used or performing the situation in which it is used. The purpose is to make audience associate with the brand with the symbols or characters shown in the advertisements (Belch & Belch, 2003, p. 281). |
| 10. | Dramatization      | Dramatization executions focus on telling a short story by using a product as the main focus (Belch & Belch, 2003, p. 281).                                                                                                                                                                                                                                                                                    |
| 11. | Humour             | Humor executions help consumer feel entertained and keep a positive outlook (Belch & Belch, 2003, p. 281).                                                                                                                                                                                                                                                                                                     |

### Segments of Cosmetic Brands in China

In China, cosmetic brands are classified, according to price, into three segments: high-end brands, middle-end brands, and low-end brands (Cao, 2016; Yang, 2011). Table 3 explains segments of cosmetic brands in China based on the data collection from interviews with related employees from L'Oréal Group (Yang, 2011), Estée Lauder Group, and some other famous cosmetic groups in the cosmetic industry. *High-end brands* represented by brands like Chanel, Dior, Estée Lauder, and Lancôme cost more than 600 yuan. *Middle-end brands* represented by brands like Olay, L'Oréal, and Shisedo are the brands with average price ranged from 200 to 600 yuan. *Low-end brands* represented by brands like Dabao and Maxam cost less than 200 yuan (Yang, 2011).

**TABLE 3.** Segments of Cosmetic Brands in China.

| Category   | Price (yuan) | Representative Brands               |
|------------|--------------|-------------------------------------|
| High-end   | >600         | Chanel, Dior, Estee Lauder, Lancôme |
| Middle-end | 200-600      | Olay, L'Oréal, Shisedo              |
| Low-end    | <200         | Dabao and Maxam                     |

## Global Standardized and Localized Advertising Strategies

As mentioned in the previous section, the high-end segment of Chinese cosmetics industry is almost occupied by international brands (HKTDC Research, 2020). When these international enterprises engage in the advertising campaigns in China, they generally use two strategies: global standardized advertising strategies and localized advertising strategies (Li & Luo, 2013). *Global standardization* is the advertising execution strategy that the advertising elements (e.g. advertising copy, visuals) keep the same across the countries (Taylor, 2005). However, *localized advertising strategies* are more frequently used in informational advertisements when brand familiarity is low (Pae et al., 2000).

According to the Coca Cola case study (Li & Luo, 2013), the global standardized advertising strategies use typical American advertising themes and international advertising spokespersons. Spokespersons communicate with audiences in English. The commercials are produced by headquarter teams and filmed at the original place. In contrast, the localized advertising strategies use Chinese culture as advertising theme and Chinese local stars as spokespersons. Spokespersons communicate with audiences in Mandarin. The commercials are produced by local advertising agency teams and filmed in China.

However, since 1960s, the question of whether or not to globalize or localize the advertising has been an ongoing debate (Agrawal, 1995). In short, supporters of global standardized strategies have argued based on the shared consumer characteristics and economic savings (Levitt, 1983), while opponents have asserted the risk of global standardized strategies because of different local market situation and cultures (Taylor, 2005). Table 4 shows the comparison between global standardized and localized advertising strategies.

**TABLE 4.** Advertising Strategies.

| Category                 | Global Standardized Advertising Strategy | Localized Advertising Strategy |
|--------------------------|------------------------------------------|--------------------------------|
| Advertising Theme        | Typical International Style              | Combined Localized Culture     |
| Advertising Spokesperson | International Spokesperson               | Local Stars                    |
| Advertising Language     | English                                  | Local Language                 |
| Shooting Place           | Original Country                         | Local Place                    |
| Created From             | Headquarter                              | Local Advertising Agency       |

The research mainly focuses on advertising appeals and advertising executions based on the Belch and Belch (2003)'s framework. Coupled with literature of Yang (2011) on segments of cosmetic brands in China and literature of Li & Luo (2013) on global standardized and

localized advertising strategies, this research sheds light on how the advertising messages in cosmetic television commercials by cosmetic brands from different segments and by both domestic and international brands are communicated to Chinese audiences.

## **METHOD**

This research applied a quantitative research approach to collect data. Through a content analysis of 60 cosmetic television commercials, the study examined media contents to identify the core content characteristics based on advertising appeals and advertising executions (Belch & Belch, 2003) used by advertisers. The content analysis “seek[s] to analyze data within a specific context in view of the meanings someone - a group or a culture - attributes to them” (Krippendorff, 1989, p. 403). It provides “aggregate accounts of inferences from large bodies of data that revealed trends [and] patterns” (p. 404). The method, therefore, allowed for shedding light on the exploratory nature of core advertising strategies that were used in television commercials.

### **Sample**

A sample of 60 cosmetic television commercials that were aired in China between a period of ten years (2009 - 2019) was used in the analysis. Historically, China started the reform and launched the open-door policy in 1979. Since then, the political situation and economic management system have been gradually stable year by year. A higher number of foreign cosmetic enterprises entered into Chinese market, especially in the past 20 years. Thus, it has greatly introduced an impact to the local cosmetic market structure and television commercials industry (Chen, 2014).

The sample was purposively selected based on the representativeness of cosmetic brand segments (high-end, middle-end, and low-end) (Yang, 2011). Four cosmetic brands were selected for each segment, therefore, the sample belonged to 12 brands: Chanel, Dior, SK-II, Lancôme, L’Oréal, Olay, Shiseido, Innisfree, Inoherb, Chando, Dabao, and Pechoin. In the high-end segment, the brands, Chanel, Dior, SK-II, and Lancôme were considered as high-end brands (Yang, 2011). In the second segment, the brands, L’Oréal, Olay, Shiseido, and Innisfree belonged to middle-end brands (Yang, 2011). In the third segment, the brands, Inoherb, Chando, Dabao, and Pechoin were considered as low-end brands (Yang, 2011). Five television commercials regardless types of products advertised were randomly selected for each brand. A total of 60 cosmetic television commercials was a unit of analysis.

### **Procedure**

In the initial phase, a sample of 60 cosmetic television commercials from 12 brands was recruited from two online video sharing websites, which were Bilibili and YouTube. The authors chose Bilibili as a major platform to recruit the sample. Founded in 2009, Bilibili is a Chinese user-generated content platform with more than 150 million active users (Zhang, 2018). Registered users upload diverse types of contents from all the world, such as, animation, documentary, live broadcast, music, dancing, game, science, fashion, advertising, and movies (Yin, 2017). This research also relied on YouTube as another platform to download

the commercials which could not be found on Bilibili. Founded in 2005, YouTube is the world's top video-sharing platform with more than 2 billion users from more than 100 countries (YouTube About, 2021). The platform allowed the researcher to add more commercials to the unit of analysis.

The data collected in this phase informed the design of the codebook and codesheet, which were pilot tested on a small unit of analysis ( $n = 18$ ) by two coders. They were graduate students in the MA Global Communication program at Bangkok University and had been properly trained to check for accuracy and intercoder reliability of the coding instrument. Reliability for all content analysis variables was calculated, following Perreault and Leigh (1989) reliability index. The average of intercoder reliability was .85.

Coders began with an explanation of the coding categories. Initially, the coders recorded the presence of elements indicated in the coding scheme (Table 5):

1. Coding scheme based on general information: brand names, countries of origin, and years
2. Coding scheme based on reviewed literature (Belch & Belch, 2003; Li & Luo, 2013; Yang, 2011): *types of advertising appeals*, *advertising executions*, *segments of cosmetic brands*, and *types of advertising strategies*

### **Coding Scheme**

Table 5 illustrates coding scheme that was mainly drawn from literature discussed in the literature review section to understand the advertising message strategies in cosmetic television commercials by popular cosmetic brands.

RQ1 examined the most frequently used advertising appeals in cosmetic television commercials that were aired in China. The coding scheme borrowed the framework by Belch and Belch (2003) which consisted of 2 types: rational/informational appeals and emotional appeals.

**TABLE 5.** General Coding Scheme.

| Item No. | Coding Item         | Instructions                                                       | Keywords                                     |
|----------|---------------------|--------------------------------------------------------------------|----------------------------------------------|
| 1        | Brand Name          | Mark 1 for the brand that the television commercial belongs to.    | <sup>9</sup> Chanel (an average of 619 yuan) |
|          |                     |                                                                    | Dior (an average of 650 yuan)                |
|          |                     |                                                                    | SK-II (an average of 1219 yuan)              |
|          |                     |                                                                    | Lancôme (an average of 1119 yuan)            |
|          |                     |                                                                    | L'Oréal (an average of 257 yuan)             |
|          |                     |                                                                    | Olay (an average of 298.4 yuan)              |
|          |                     |                                                                    | Shiseido (an average of 497.5 yuan)          |
|          |                     |                                                                    | Innisfree (an average of 298.4 yuan)         |
|          |                     |                                                                    | Inoherb (an average of 108.2 yuan)           |
|          |                     |                                                                    | Chando (an average of 136 yuan)              |
|          |                     |                                                                    | Dabao (an average of 63.3 yuan)              |
| 2        | Countries of Origin | Mark 1 for the country that the brand originated from.             | Pechoin (an average of 134.8 yuan)           |
|          |                     |                                                                    | Korea                                        |
|          |                     |                                                                    | China                                        |
|          |                     |                                                                    | France                                       |
|          |                     |                                                                    | Japan                                        |
| 3        | Years               | Mark 1 for the year when this television commercial was published. | America                                      |
|          |                     |                                                                    | 2009                                         |
|          |                     |                                                                    | 2010                                         |
|          |                     |                                                                    | 2011                                         |
|          |                     |                                                                    | 2012                                         |
|          |                     |                                                                    | 2013                                         |
|          |                     |                                                                    | 2014                                         |
|          |                     |                                                                    | 2015                                         |
|          |                     |                                                                    | 2016                                         |
|          |                     |                                                                    | 2017                                         |
|          |                     |                                                                    | 2018                                         |
|          |                     |                                                                    | 2019                                         |

<sup>9</sup> Information of an average price of each brand was drawn from [www.taobao.com](http://www.taobao.com)

**TABLE 5.** (Continued 1)

| <b>Item No.</b> | <b>Coding Item</b>          | <b>Instructions</b>                                                                                                                      | <b>Keywords</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4               | Advertising Ap-<br>peals    | Mark 1 for the advertising<br>appeals that were used in<br>the television commercial.<br><br>*multiple selections per-<br>mitted         | Rational/Informational Appeals: competitive<br>advantage appeal, feature appeal, news ap-<br>peal, product/service popularity appeal, and<br>favorable price appeal (Belch & Belch,<br>2003)<br><br>Emotional Appeals: personal states or feel-<br>ings and social-based feelings (Belch &<br>Belch, 2003)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 5               | Advertising Ex-<br>ecutions | Mark 1 for the advertising<br>executions that were used<br>in the television commer-<br>cial.<br><br>*multiple selections per-<br>mitted | Straight Sell: straightforward presentation of<br>information concerning the product or ser-<br>vice (Belch & Belch, 2003)<br><br>Scientific/Technical Evidence: technical in-<br>formation, results of scientific or laboratory<br>studies, or endorsements by scientific bodies<br>or agencies (Belch & Belch, 2003)<br><br>Demonstration: key advantages of the prod-<br>uct/service presented in actual use or in<br>some staged situation (Belch & Belch, 2003)<br><br>Comparison: a brand's particular advantage<br>or positioning is compared with the one by<br>its competitors (Belch & Belch, 2003)<br><br>Testimonial: a person praises the prod-<br>uct/service on the bases of his/her personal<br>experience with it (Belch & Belch, 2003)<br><br>Slice of Life: a problem/solution approach<br>that advertisers present how a prod-<br>uct/service can resolve the problem (Belch<br>& Belch, 2003)<br><br>Animation: animated scenes drawn by artists<br>or created on the computer, and cartoons,<br>puppets, or other types of fictional characters<br>(Belch & Belch, 2003)<br><br>Personality Symbol: a central character or<br>personality symbol that can deliver the mes-<br>sage and with which the product or service<br>can be identified (Belch & Belch, 2003)<br><br>Imagery/Fantasy: an imagery advertising<br>approach that relies on images and symbols<br>that become associated with the brand<br>(Belch & Belch, 2003) |

**TABLE 5.** (Continued 2)

| Item No. | Coding Item            | Instructions                                                                       | Keywords                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                        |                                                                                    | Dramatization: a problem/solution approach that is similar to slice-of-life executions but it uses more excitement and suspense in telling the story (Belch & Belch, 2003).                                                                                                                                                                                                                                                                                                                          |
|          |                        |                                                                                    | Humor: a creative execution that engages audiences by something that is funny and memorable (Belch & Belch, 2003).                                                                                                                                                                                                                                                                                                                                                                                   |
| 6        | Brand Segments         | Mark 1 for the brand segment that the television commercial belongs to.            | High-End: the price of the product is more than 600 yuan (Yang, 2011)<br>Middle-End: the price of the product is between 200 and 600 yuan (Yang, 2011)<br>Low-End: the price of the product is less than 200 yuan (Yang, 2011)                                                                                                                                                                                                                                                                       |
| 7        | Advertising Strategies | Mark 1 for the advertising strategies that were used in the television commercial. | Global Standardized Strategy: typical advertising themes across the world, international advertising spokespersons, English language used to communicate with audiences, production by headquarter teams, shooting at the original place (Li & Luo, 2013)<br>Localized Strategy: Chinese culture as advertising themes, Chinese local stars as spokespersons, Mandarin language used to communicate with audiences, production by local advertising agency teams, shooting in China (Li & Luo, 2013) |

RQ2 examined the most frequently used advertising executions in cosmetic television commercials that were aired in China. The coding scheme borrowed the framework by Belch and Belch (2003) which consisted of 11 types: straight sell, scientific/technical evidence, demonstration, comparison, testimonial, slice of life, animation, personality symbol, imagery, dramatization, and humor.

RQ3 and RQ4 compared advertising appeals (RQ3) and advertising executions (RQ4) in cosmetic television commercials by cosmetic brands from different cosmetic segments. In addition to Belch and Belch (2003), the coding scheme borrowed the framework by Yang (2011) which consisted of 3 types: high-end, middle-end, and low-end segments.

RQ5 compared the most frequently used advertising executions in cosmetic television commercials by international brands. The coding scheme borrowed the framework by Li & Luo (2013) which consisted of 2 types: global standardized and localized advertising strategies.

## FINDING

A quantitative content analysis of 60 cosmetic television commercials that were aired in China between 2009 and 2019 reveals numerous interesting findings:

RQ1: What advertising appeals are most frequently used in cosmetic television commercials?

Of the 60 commercials, emotional appeals (62.1%) were more frequently observed than rational appeals (37.9%) in cosmetic television advertising as shown in Table 6. The finding showed that advertisers were more likely to persuade Chinese consumers by appealing to their emotions rather than the product attribute.

**TABLE 6.** Advertising Appeals used in Cosmetic Television Commercials (n = 60).

| Category                       | Frequency | Percentage |
|--------------------------------|-----------|------------|
| Rational/Informational Appeals | 25        | 37.9%      |
| Emotional Appeals              | 41        | 62.1%      |

*\*multiple selections permitted*

**TABLE 7.** Advertising Executions used in Cosmetic Television Commercials (n = 60).

| Category                      | Frequency | Percentage |
|-------------------------------|-----------|------------|
| Straight Sell                 | 12        | 10.1%      |
| Scientific/Technical Evidence | 5         | 4.2%       |
| Demonstration                 | 19        | 15.9%      |
| Comparison                    | 0         | 0          |
| Testimonial                   | 38        | 31.9%      |
| Slice of Life                 | 6         | 5.0%       |
| Animation                     | 0         | 0          |
| Personality Symbol            | 0         | 0          |
| Imagery                       | 35        | 29.4%      |
| Dramatization                 | 3         | 2.5%       |
| Humor                         | 1         | 0.8%       |

*\*multiple selections permitted*



RQ2: What advertising executions are most frequently used in cosmetic television commercials?

Of the 60 commercials, testimonial executions (31.9%) were the most frequently used advertising executions in the commercials as shown in Table 7. The commercials relied on celebrity endorsement as spokesperson and ordinary satisfied consumers to share their own experiences with the brand (Belch & Belch, 2003).

RQ3: Do cosmetic brands from different segments (high-end, middle-end, and low-end) tend to use different advertising appeals in cosmetic television commercials?

According to Yang (2011), there were three cosmetic brand segments in China: high-end, middle-end, and low-end. For commercials by high-end and middle-end brands, emotional appeals (71.4%, 68%) were more frequently used than rational/informational appeals as shown in Table 8. In Chanel's Chance Eau Vive commercial, joy and excitement emotions were carried out in the bowling game scene among young, feminine and tasteful models. For the middle-end brands like L'Oréal, their luxe leather lipsticks commercial showcased different colors of lipstick. The model endorsed in products was portrayed as fierce, sexy, rebel, cool, and wild. The commercial mainly communicated the brand's key message by using the hashtag #IamWorthIt. For commercials by low-end brands, rational/informational appeals (55%) were more preferred than emotional appeals as shown in Table 8. For example, Inoherb and Dabao advertisers were most likely to demonstrate the features and benefits of the products in the commercials.

**TABLE 8.** Advertising Appeals used in Cosmetic Television Commercials by Brands from Different Segments (n = 20).

| Category                              | High-end<br>n = 20 | High-end<br>% | Middle-end<br>n = 20 | Middle-end<br>% | Low-end)<br>n = 20 | Low-end)<br>% |
|---------------------------------------|--------------------|---------------|----------------------|-----------------|--------------------|---------------|
| <b>Informational/Rational Appeals</b> | 6                  | 34.6%         | 8                    | 32.0%           | 11                 | 55.0%         |
| <b>Emotional Appeals</b>              | 15                 | 71.4%         | 17                   | 68.0%           | 9                  | 45.0%         |

*\*multiple selections permitted*

RQ4: Do cosmetic brands from different segments (high-end, middle-end, and low-end) tend to use different advertising executions in cosmetic television commercials?

For commercials by high-end brands, testimonial (36.8%) and imagery executions (36.8%) were the most frequently used advertising executions as shown in Table 9. For commercials by middle-end brands, imagery executions (29.3%) were the core advertising executions. The use of imagery executions allow audiences to associate visual appeals with brand elements (Belch &

Belch, 2003). In contrast, for commercials by low-end brands, testimonial executions (32.5%) were the primary advertising executions.

**TABLE 9.** Advertising Executions used in Cosmetic Television Commercials by Brands from Different Segments (n = 20).

| Category                                | High-end<br>n = 20 | High-end<br>% | Middle-end<br>n = 20 | Middle-end<br>% | Low-end<br>n = 20 | Low-end<br>% |
|-----------------------------------------|--------------------|---------------|----------------------|-----------------|-------------------|--------------|
| <b>Straight sell or factual message</b> | 2                  | 5.3%          | 1                    | 2.4%            | 9                 | 22.5%        |
| <b>Scientific/Technical Evidence</b>    | 0                  | 0             | 3                    | 7.3%            | 2                 | 5%           |
| <b>Demonstration</b>                    | 5                  | 13.2%         | 8                    | 3.28%           | 6                 | 15.0%        |
| <b>Comparison</b>                       | 0                  | 0             | 0                    | 0               | 0                 | 0            |
| <b>Testimonial</b>                      | 14                 | 36.8%         | 11                   | 26.8%           | 13                | 32.5%        |
| <b>Slice of Life</b>                    | 2                  | 5.2%          | 3                    | 7.3%            | 1                 | 2.5%         |
| <b>Animation</b>                        | 0                  | 0             | 0                    | 0               | 0                 | 0            |
| <b>Personality Symbol</b>               | 0                  | 0             | 0                    | 0               | 0                 | 0            |
| <b>Imagery</b>                          | 14                 | 36.8%         | 12                   | 29.3%           | 9                 | 22.5%        |
| <b>Dramatization</b>                    | 1                  | 2.6%          | 2                    | 4.9%            | 0                 | 0            |
| <b>Humor</b>                            | 0                  | 0             | 1                    | 2.4%            | 0                 | 0            |

*\*multiple selections permitted.*

RQ5: Regarding television commercials from international brands, what advertising executions are most frequently used in commercials with global standardization strategies vs localized advertising strategies?

According to Li and Luo (2013), television commercials by international cosmetic brands relied on two advertising strategies: global standardized and localized advertising strategies. Of 40 commercials by international brands, 55% of the commercials used global standardized strategy while 45% of the commercials used localized strategy as shown in Table 10. For the commercials that used global standardized strategies, imagery executions (40.5%) were the primary advertising executions, as shown in Table 11. The commercials portrayed brand personality through the use of international celebrity endorsers to tell their brand stories in English. For the commercials that used global standardized strategy like the French cosmetic brand Dior, the international celebrity Charlize Theron portrays a golden goddess to represent luxurious brand image of Dior J'Adore fragrance in the commercials. In contrast, for commercials that used localized strategy, testimonial (24.3%) and imagery executions (24.3%) were the most popular advertising executions used by advertisers as shown in Table 11. For some of the commercials by the Japanese cosmetic brand SK-II, advertisers used Chinese model Tang Wei to demonstrate how to use SK-II Stempower products. She carried the message to persuade the audience to become less focus on aging by presenting the product's anti-aging benefit.

**TABLE 10.** Advertising Strategies used in Cosmetic Television Commercials by International Brands (n = 40).

| Category                            | Frequency | Percentage |
|-------------------------------------|-----------|------------|
| <b>Global Standardized Strategy</b> | 22        | 55.0%      |
| <b>Localized Strategy</b>           | 18        | 45.0%      |

**TABLE 11.** Global Standardized Strategy (n = 22) and Localized Strategy (n = 18) used in Cosmetic Television Commercials by International Brands.

| Category                                       | Global Stand-<br>ardized Strat-<br>egies<br>(n = 22) | Global<br>Standardized<br>Strategies<br>(%) | Localized<br>Advertising<br>Strategies<br>(n = 18) | Localized<br>Advertising<br>Strategies<br>(%) |
|------------------------------------------------|------------------------------------------------------|---------------------------------------------|----------------------------------------------------|-----------------------------------------------|
| <b>Straight sell or<br/>factual message</b>    | 0                                                    | 0                                           | 3                                                  | 8.1%                                          |
| <b>Scien-<br/>tific/Technical<br/>Evidence</b> | 1                                                    | 2.4%                                        | 2                                                  | 5.4%                                          |
| <b>Demonstration</b>                           | 4                                                    | 9.5%                                        | 8                                                  | 21.6%                                         |
| <b>Comparison</b>                              | 0                                                    | 0                                           | 0                                                  | 0                                             |
| <b>Testimonial</b>                             | 16                                                   | 38.1                                        | 9                                                  | 24.3%                                         |
| <b>Slice of Life</b>                           | 2                                                    | 4.8%                                        | 3                                                  | 8.1%                                          |
| <b>Animation</b>                               | 0                                                    | 0                                           | 0                                                  | 0                                             |
| <b>Personality<br/>Symbol</b>                  | 0                                                    | 0                                           | 0                                                  | 0                                             |
| <b>Imagery</b>                                 | 17                                                   | 40.5%                                       | 9                                                  | 24.3%                                         |
| <b>Dramatization</b>                           | 2                                                    | 4.8%                                        | 1                                                  | 2.7%                                          |
| <b>Humor</b>                                   | 0                                                    | 0                                           | 1                                                  | 2.7%                                          |

*\*multiple selections permitted.*

## DISCUSSION AND CONCLUSION

The results of a content analysis of 60 cosmetic television commercials from 12 brands that were aired in China between 2009 and 2019 bore numerous points for discussion.

First, the results establish that emotional appeals were the dominant advertising appeals used in cosmetic television commercials. The premise is supported by Huang (2021) that emotional appeals were used to build brand image and sell products, regarding advertising appeals in cosmetic short videos on Weibo. In line with Bartikowski, Laroche, and Richard (2019), fear appeals which were considered types of emotional appeals were more frequent-

ly used in beauty and personal products, regarding print advertisements across China, France, and Canada. Moreover, the results show that testimonial executions were the primary advertising executions used in cosmetic television commercials. The finding is supported by Sun (2013), advertisers in China were more likely to rely on celebrity endorsers to create advertising messages that conveyed the meanings for both the endorsers and the brands. Comparison executions were not reported due to the strict prohibition of comparative advertising in China. It was mostly classified as false propaganda and commercial slander in China (Huang, 2017).

Second, for commercials by high-end and middle-end cosmetic brands, advertisers were more likely to evoke consumers' emotions. However, commercials by low-end brands tended to focus more on utilitarian purposes. For commercials by low-end cosmetic brands, the use of rational appeals served to provide facts in terms of price and benefits. Supported by Yang (2011), advertisers tended to avoid the use of appeals and executions that evoked consumers' feeling. Instead, they would rather straightforwardly present the basic information. For advertising executions, imagery executions were also most frequently used for commercials by high-end (in addition to testimonial executions) and middle-end brands. As Stokburger-Sauer and Teichmann (2013) explained, luxury brands tended to provide more hedonic value than non-luxury brands. Therefore, advertisers tried to identify sensorial experiences and emotional motive that could produce consumers' positive feeling towards positive images of the brand.

Third, for international cosmetic brands, global standardized advertising strategies were more used than localized advertising strategies. Proposed by Zhou and Belk (2004), Chinese consumers perceived that global standardized strategy fulfilled the desire for global cosmopolitanism and status. However, the commercials that used localized strategy promoted the desire for nationalism as to invoke Chinese values driven by the local culture.

Third, the authors observed the 10-year trends of advertising strategies used in cosmetic television commercials between 2009 and 2019. It is evident that the use of emotion appeals has been adopted throughout the 10 years. The use of testimonial and imagery executions has been prevalent, only that imagery executions have become more popular than testimonial executions between 2015 and 2019. Puppin (2020) observed, China's advertising industries have maintained stable growth after the successful hosting of Beijing Olympics in 2008 and the Shanghai World Expo in 2010. Between 2009 and 2019, creativity and artistic quality characterized the advertising works in the period, evidenced by its first Gold Lion at the Cannes Lions International Festival of Creativity and other world-recognized awards. The results of this study could reflect China's advertising industries in this period.

## LIMITATIONS

This research has some limitations. It drew the broad categories of rational/informational appeals and emotional appeals by Belch and Belch (2003) to create the coding scheme. Therefore, the coders recorded the presence of only rational/informational appeals and/or emotional appeals. However, the coding scheme did not instruct coders to record the pres-

ence of subcategories of the appeals. For example, rational appeals may include price and feature of product appeals while emotional appeals may include personal states or feelings and social-based feelings (Belch & Belch, 2003).

## **RECOMMENDATIONS**

This research sheds light on message strategies used in cosmetic television commercials that were aired in China between 2009 and 2019. The results of this research have provided an insight for advertisers, marketers, and creative organizations to implement message strategies for cosmetic brands. Although this research examined a sample of television commercials, the insight could be used for producing videos that could be disseminated on social media. First, the implementation of advertising strategies for Chinese consumers involves the factor of cosmetic brand segments. The use of emotional appeals by high-end and middle-end brands potentially creates positive associations between visual elements and consumers' status and brand image. However, the use of rational appeals by low-end brands potentially affects informativeness of the commercials. Moreover, straightforward advertising and vivid images are useful in communicating with illiterate consumers (De Mooij, 1998). Second, testimonial executions lend themselves to carry out messages to the target of brands in every segment. Advertisers should choose celebrity endorsers or satisfied consumers that could relate to the brand. Third, advertisers should be informed of norms, rules, and restrictions of advertising in each country. For example, comparison advertising is not commonly used in China but widely used in the United States. Fourth, whether commercials by international brands relied on global standardized or local advertising strategies, advertisers should choose advertising appeals and executions that best communicate the messages to the target audience. Further research may consider cross-cultural communication research which explores cultural differences that affect the production of message strategies of cosmetic television commercials. Moreover, further research can include subcategories of advertising appeals in their research. For instance, Belch and Belch (2003) divided the feelings that can serve as the basis of emotional appeals into two groups: personal states or feelings and social-based feelings. The total of 19 personal states and 9 social-based feelings should be included in the coding scheme.

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# **INFLUENCES OF PARASOCIAL INTERACTION BETWEEN MARK WIENS'S TRAVEL VLOGS AND INDONESIAN VIEWERS ON THEIR TRAVEL INTENTIONS TO THAILAND**

by

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## **ABSTRACT**

This research aimed to explore the potential influences of YouTube travel vlogs about Thailand by American vlogger, Mark Wiens, on his Indonesian viewers. The study examined causal relationship between vlogger's parasocial interaction, his viewers' vlogger-viewer imagery fit, perceived country image of Thailand, and travel intentions to Thailand. Using purposive and snowball sampling, an online survey was conducted with 153 Indonesians living outside Thailand who watched at least five videos about Thailand by Mark Wiens. Simple Linear Regression and Multiple Linear Regression were used to test the proposed research hypotheses. Analysis results supported all seven hypotheses such that Mark Wiens's social and physical attractiveness along with attitude homophily significantly influenced his parasocial interaction with Indonesian viewers, his parasocial interaction significantly influenced his viewers' vlogger-viewer imagery fit and perceived country image of Thailand, which further significantly influenced their travel intentions to Thailand. Implications were given for both academic and business sector regarding on how travel vlogs can be used to promote travel intention via vloggers' parasocial interaction and their viewers.

**KEY WORDS:** Parasocial interaction, YouTube, vlogger-viewer imagery fit, country image, travel intentions

## INTRODUCTION

The development of information technology has changed the way of how people communicate. The presence of the Internet in life makes it easier for people to access the information they need, including country information as a travel destination among tourists. The Internet has become a necessity in sharing and seeking information related to planning, decision making, and all the needs for travel. This is due to its high level of interactivity, customization, and ability to provide experience according to the needs of its users (Gonzalo, 2019).

The Internet also has become a platform to facilitate continuous technological innovation like the emergence of social media as the Internet connectivity and cell phone usage spread even further. Defined by its interactive nature and user-generated content, social media has largely been a tool used by people, companies, even organizations to share thoughts, information, messages, photos, and videos (Highfield, 2015). The importance of utilizing social media in developing tourism is an opportunity for a country to attract tourists because contents that are available on social media can act as reference sources. Thailand, as the focus of this study for travel destination, has an official government unit called the Tourism Authority of Thailand (TAT) which supplies information and data on tourist attractions to the public and encourages both local and international tourists to travel in and around Thailand. On the economic front, particularly tourism sector, Thailand has enjoyed long and close bilateral relations with Indonesia as the tourism between two countries has been steadily rising (Royal Thai Embassy, 2017). In 2019, roughly 706,908 Indonesian tourists visited Thailand (Ministry of Tourism & Sports, 2020) and about 136,699 Thai tourists visited Indonesia (Statistics Indonesia, 2020). Both countries are popular tourist destinations in Southeast Asia.

Related to tourism industry, the information and targeted communication efforts on social media have a substantial influence on people's intention and decision to travel to certain destinations (Gretzel & Fesenmaier, 2009). With regard to parasocial interaction in YouTube, it is expected that the attractiveness of the vlogger both socially and physically would contribute to more engaged audiences with the vlogs. Respectively, there would be more exposure to travel vlogs with more contribution to people's travel intentions accompanied by the established country image. Since the Internet and social media are evolving into an inevitable information source in various decision making in our daily life, this study desires to examine the potential influences of parasocial interaction between an American vlogger, Mark Wiens, and his Indonesian viewers on their travel intention to Thailand.

Mark Wiens is passionate about food and travel. He is based in Bangkok, Thailand, therefore creating a lot of contents that cover the story and his food adventure in Thailand. Since started vlogging in 2009, Mark Wiens has been earning 7.77 million of subscribers with around 1.7 billion of views for the vlogs on his channel per 1st of July 2021.

This study was conducted to achieve five objectives: 1) To investigate the potential influences of travel vlogs on Indonesian viewers' parasocial interaction, 2) To investigate the

potential influences of parasocial interaction on Indonesian viewers' country image of Thailand, 3) To investigate the potential influences of parasocial interaction on Indonesian viewers' vlogger-viewer imagery fit, 4) To investigate the potential influences of Indonesian viewers' country image of Thailand on their travel intentions to Thailand, and 5) To investigate the potential influences of Indonesian viewers' vlogger-viewer imagery fit on their travel intentions to Thailand.

## **MATERIALS AND METHOD**

### **Parasocial Interaction**

Parasocial interaction theory is one of the earliest theoretical approaches that connects mass communication and interpersonal social settings. First introduced by Horton and Wohl (1956), just like social relationships, this interaction develops over time and enhanced when media presentations resemble interpersonal interaction. Their concept of parasocial interaction focused primarily on non-fictional mass media performers, such as newscasters, that were typical in 1950s. Parasocial interaction is conceptualized by Rubin, Perse, and Powell (1985, p. 156-157) as "interpersonal involvement of the media user with what he or she consumes." The involvement includes "seeking guidance from a media persona, seeing media personalities as friends, imagining being part of a favorite program's social world, and desiring to meet media performers."

Frederick, Lim, Clavio, and Walsh (2012) also found that parasocial interaction explains the relationship between media personalities and media users. There is also interpersonal involvement of the media users with what they consume. Similarly, according to research conducted by Lee and Watkins (2016), media users sometimes want to associate with the media personalities and assume that they belong to the same social world and try sharing information to each other. In the digital era, the relationships between media personalities and media users have been increased with the appearance of social media that provide easy interactions and this has sparked a new area of academic research on parasocial interaction (Stever & Lawson, 2013).

Further on Lee and Watkins's study regarding social media (YouTube), media personalities (vloggers), and media users (audiences), the relationship which exists on YouTube between the vloggers and their audiences can be explained by the parasocial interaction theory because they share an aspect of their lives that "normal celebrities" do not normally share with their fans under normal circumstances. O'Neil-Hart and Blumenstein (2016) added that YouTube vloggers are more influential than traditional celebrities because of their friendly nature and how they communicate with their viewers. In addition, the relaxed nature of the vlogs on YouTube and how the vloggers share their experiences, personal stories and encounters with their viewers, make the viewers feel relaxed and feel like they were a part of the vlogger's life (Colliander & Erlandsson, 2015).

## **Social Attractiveness, Physical Attractiveness, and Attitude Homophily**

Social attractiveness, physical attractiveness, and attitude homophily were found to be predictors of parasocial interaction. According to McCroskey and McCain (1974), the more attractive another individual is, the more an individual will communicate with that person. Rubin and McHugh (1987) also found media personalities who were attractive as social or work partners provided a better context for parasocial interaction. Social attractiveness can be described as a persona's personality that makes him or her likable. It is about how they speak, how they think, how they behave in social interaction. It is interesting because even with a lack of physical cues, levels of high attraction based on social attraction can be found towards radio hosts (Rubin & Step, 2000).

Past research about parasocial interaction also suggested that a form of affective program involvement associated with a personal focus on the physical attraction of the characters. Olson and Marschuetz (2005) found that physical attractiveness is primarily determined by a person's facial attractiveness and is automatically and rapidly evaluated "at a glance" gives very powerful influence on the person's ability to persuade others, even when the person is not trying deliberately to persuade. This supported that viewers attraction to media personalities, especially in form of physical attraction, contributes to popularity and success of the media personalities. Seeing them who are physically attractive, the viewers will be more likely to spend more time interacting with them because of the liking that is felt for them (Rubin & Perse, 1987).

Another predictor is attitude homophily. According to Eyal and Rubin (2003, p. 80), homophily is defined as the degree to which people who interact are similar in beliefs, education, social status, and the like. In parasocial interaction, the more viewers perceive similarities between their beliefs and the vlogger, the more likely the interaction between one and another happens. As well as in interpersonal relationships, communication increases and becomes more effective when the two individuals are possessing similarities (McCroskey, Richmond, & Daly, 1975). Therefore, parasocial interaction is more likely to occur when viewers perceive the vlogger to be similar to themselves and others in their interpersonal network (Turner, 1993).

## **Perceived Country Image**

According to Martin and Eroglu (1993, p. 193), country image refers to "the total of all descriptive, inferential and informational beliefs one has about a particular country." It is also suggested that "country image is the sum of beliefs and impressions people hold about places" (Kotler, Haider, & Rein, 1993, p. 141). Mass-mediated country image has been the main focus on communication science. The dynamics of coverage of countries in the international news show the strong effect of mass-mediated country images on the formation of public opinion and perception about foreign countries (Wanta, Golan, & Lee, 2004). The fact that mass media play role in the formation of country image has enhanced numerous content analyses which evaluate image of certain countries as portrayed in foreign media (Wu, 1997). The concept of the country image is predominantly unidimensional (for in-

stance, covering valence from positive to negative tonality) or based on stereotypes or themes in media content like for example temples, Muay Thai, and elephants for Thailand.

While traditional mass media have significant influence on people's perceptions of other countries, the diverse online communication tools like social media have become important channels to obtain knowledge and information about various aspects of our personal and social lives, including events happening in other countries (OECD, 2010). Individuals may form perceptions of other countries even without firsthand experience through their online interactions with people from those countries and also through simply seeking information on the countries. Thus, the information that people obtain from online sources may influence their understandings of other countries. Consequently, it may form perceived country image and influence their travel intentions to those countries.

### **Vlogger-viewer Imagery Fit**

Vlogger-viewer imagery fit is the overall assessment of the compatibility or match between vlogger and viewers, in which the term is developed from a study about luxury brand that is called brand-user imagery fit and it is described as the more a consumer assesses one's self to be similar to the typical brand-user, the more likely the individual consumer assesses the brand to be of value (Miller & Mills, 2012, p. 1474). Therefore, vlogger-viewer imagery fit is the viewers' overall assessment of the compatibility or match between themselves and other viewers of vlogger's YouTube channel.

### **Behavioral Intention**

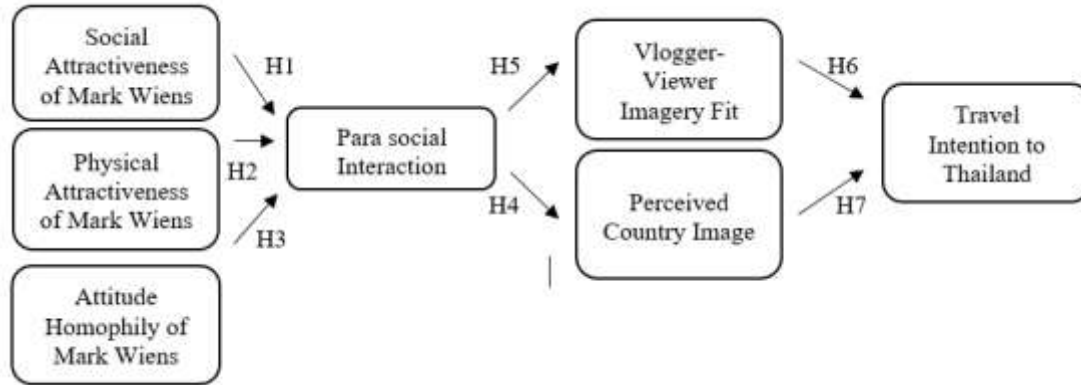
As defined by the Committee on Communication for Behavior (2002), behavioral intention refers to "a person's perceived likelihood or subjective probability that he or she will engage in a given behavior." Esper and Rateike (2010) found a cognitive factor, an emotional factor, and an intentional factor in individual's attitude. The cognitive factor refers to personal knowledge and belief in the attitude targeting, emotional factor which indicates personal feeling or emotion, and intentional factor that presents in personal action or behavioral intention of the attitude target (Li, 2014). Hsiao, Lu, and Lan (2013) regarded cognitive factor and emotional factor as the determinants of attitude which are the overall evaluation determined by belief and feeling, while the behavioral tendency is determined by attitude. It suffices to say that when individuals become interested in a particular destination, they are likely to visit it due to their personal intention.

### **Research Conceptual Framework and Research Hypothesis**

The conceptual framework for this research was developed from Lee's and Watkins's research (2016) related to parasocial interaction theory. Both social and physical attractiveness together with attitude homophily are the predictors of parasocial interaction between vlogger and his viewers. Consequently, positive effects of Indonesian viewers' parasocial interaction on their perceived country image of Thailand (Punnahitanond, 2018, pp. 97-98)

and vlogger-viewer imagery fit are expected, which in turn influence their travel intentions to Thailand.

**FIGURE 1: Conceptual Framework**



Based on the above conceptual model, seven research hypotheses were formulated:

|           |                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------|
| <b>H1</b> | Social attractiveness of Mark Wiens has influences on viewers' parasocial interaction              |
| <b>H2</b> | Physical attractiveness of Mark Wiens has influences on viewers' parasocial interaction            |
| <b>H3</b> | Attitude homophily of Mark Wiens has influences on viewers' parasocial interaction                 |
| <b>H4</b> | Viewers' parasocial interaction has influences on their perceived country image of Thailand        |
| <b>H5</b> | Viewers' parasocial interaction has influences on their vlogger-viewer imagery fit                 |
| <b>H6</b> | Viewers' vlogger-viewer imagery fit has influences on their travel intentions to Thailand          |
| <b>H7</b> | Viewers' perceived country image of Thailand has influences on their travel intentions to Thailand |

## METHODOLOGY

### Research design, Population, and Sample

This research employed survey research method. The target population were Indonesian viewers living outside Thailand with proposed samples of 300 participants, aged 18 to 44 years old, male and female having an interest in travel vlogs, and being active on YouTube and ever watched at least five videos about Thailand from Mark Wiens's YouTube channel within the last 6 months. Due to limitation by time, budget, and target population, purposive sampling and snowball sampling were used to draw only 152 samples. Started with purposive sampling where the samples were selected on the basis of researcher's judgment about which ones would be the most useful or representative, such as recruiting Indonesian friends to participate as initial participants. Then, it was continued with snowball

sampling where the samples were extended by asking the initial participants for referral for possible new participants.

### **Research Measurement**

A self-administered online questionnaire via SurveyMonkey was created based on past researches by Lee and Watkins (2016) and Punnahitanond (2018). Some measurements by McCroskey, McCroskey, and Richmond (2006) were also utilized. The respondents were asked to provide their personal data in terms of gender, age, marital status, occupation, and education. They were also asked about how much time they spent on YouTube watching travel vlogs with a five point-scale ranging from 1 = short (less than 30 minutes/day), 2 = quite short (30 - 60 minutes/day), 3 = moderate (>1 hour – 2 hours/day), 4 = quite long (>2 – 3 hours/day), to 5 = long (> 3 hours/day). Another question is how many Mark Wiens's vlogs they have watched.

Attitude homophily (8 items), social attractiveness (5 items), and physical attractiveness (3 items), parasocial interaction (10 items), perceived country image of Thailand (15 items), and vlogger-viewer imagery fit (3 items) were measured using 5-point Likert scales. Lastly, for travel behaviors, respondents were asked a question regarding past visit to Thailand that is measured by using number of times they visited Thailand on six different purposes by a three-point scale (0 = never, 1 = once, 2 = more than once). Another question is regarding satisfaction on past visit to Thailand measured by using a three-point scale (1 = unsatisfied, 2 = neither unsatisfied nor satisfied, 3 = satisfied). For respondents who never visited Thailand can choose another answer (4 = cannot answer). Followed by questions regarding travel intention to Thailand measured by using respondents' degree of agreement and disagreement with three statements related to their intention to travel to Thailand within one year by using a five-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree).

### **Data Analysis**

All measurement scales were examined for reliability test where the Cronbach's Alpha values were greater than .70. The collected survey data were analyzed using descriptive statistics such as mean, standard deviation, and percentage. In addition, Multiple Linear Regression Analysis was used to test H1, H2, H3, H6, and H7 whereas Simple Linear Regression was conducted to test H4 and H5.

## **RESULTS**

The online survey collected 153 respondents. As one respondent is 51 years old and out of age range for this study, the total valid samples became 152 respondents. Based on the statistical analyses of their demographic characteristics, there was a higher percentage of female (61.8%) than male (38.2%) respondents. In terms of age, the respondents' age range is from 18 to 44 years. The majority of the respondents are 27 - 35 years old (72.7%), followed by 18 - 26 years old (21.2%), and over 36 – 44 years old (6.1%), respectively. For

occupations, the majority of the respondents are company employee (43.4%), followed by government officer (22.4%), self-employed (11.2%), student (10.5%), teacher/lecturer (5.9%), freelancer (4.6%), and others (2%), respectively. In terms of educational level, most respondents in this study are undergraduate degree holders (59.2%), followed by graduate degree holders (31.6%) high school education holders (5.3%), and post graduate degree holders (3.9%).

In terms of their YouTube usage, most respondents usually spend 30 – 60 minutes per day (48.3%), followed by more than 1 – 2 hours per day (31.5%), less than 30 minutes per day (16.1%), more than 2 – 3 hours per day (2.7%), and more than 3 hours per day (1.3%).

In term of respondents' travel behavior and satisfaction, descriptive statistics showed that almost half of the respondents (43.8%) had visited Thailand at least once for travel. Majority of them have never visited Thailand for other purposes. In terms of satisfaction on past visit to Thailand, almost half of them (43.8%) had satisfied past visit whereas only 2.7% had unsatisfied past visit.

**TABLE 1.** Mean, Standard Deviation, and Cronbach's Alpha of Examined Variables

| Variable                            | N   | Mean | S.D. | No. of Item | Cronbach's Alpha |
|-------------------------------------|-----|------|------|-------------|------------------|
| Attitude Homophily                  | 149 | 3.78 | 4.19 | 8           | .93              |
| Vlogger's Attractiveness            |     |      |      | 8           |                  |
| - Social Attractiveness             | 148 | 4.27 | 2.42 | 5           | .86              |
| - Physical Attractiveness           | 148 | 3.85 | 2.60 | 3           | .94              |
| Para-social Interaction             | 147 | 4.11 | 5.14 | 10          | .92              |
| Vlogger-Viewer Imagery Fit          | 147 | 3.80 | 1.91 | 3           | .87              |
| Perceived Country Image of Thailand | 147 | 4.01 | 7.11 | 15          | .92              |
| Travel Intention to Thailand        | 146 | 4.10 | 2.24 | 3           | .83              |

Based on the above table, all of the Cronbach's Alpha values are found to be greater than .70. Interpreting the mean scores yield that samples have high level of attitude homophily ( $\bar{X} = 3.78$ ,  $S.D. = 4.19$ ), high level of vlogger's social attractiveness ( $\bar{X} = 4.27$ ,  $S.D. = 2.42$ ), high level of vlogger's physical attractiveness ( $\bar{X} = 3.85$ ,  $S.D. = 2.60$ ), high level of parasocial interaction ( $\bar{X} = 4.11$ ,  $S.D. = 5.14$ ), high level of vlogger-viewer imagery fit ( $\bar{X} = 3.80$ ,  $S.D. = 1.91$ ), high level of perceived country image of Thailand ( $\bar{X} = 4.01$ ,  $S.D. = 7.11$ ), and high level of travel intentions to Thailand ( $\bar{X} = 4.10$ ,  $S.D. = 2.24$ ).



**TABLE 2.** Results of Multiple Regression Analysis

| Predictor                  | Dependent Variable     | $R^2$ (df) | B    | S.E. | Beta | t        |
|----------------------------|------------------------|------------|------|------|------|----------|
| Attitude Homophily         | Parasocial Interaction | .51<br>(3) | .403 | .088 | .318 | 4.593*** |
| Social Attractiveness      | Parasocial Interaction |            | .623 | .161 | .282 | 3.881*** |
| Physical Attractiveness    | Parasocial Interaction |            | .568 | .142 | .282 | 3.998*** |
| Vlogger-viewer Imagery Fit | Travel Intention       | .30<br>(2) | .517 | .083 | .442 | 6.265*** |
| Country Image of Thailand  | Travel Intention       |            | .087 | .022 | .278 | 3.947*** |

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Based on the Multiple Regression Analysis results shown in Table 2, the  $R^2 = .51$ , taken as a set, the predictors attitude homophily, social attractiveness, and physical attractiveness account for 51% of the variance in parasocial interaction. The overall regression model was statistically significant,  $F(3, 143) = 48.9$ ,  $p < .001$ . The coefficients table looks at each predictor individually with significant at .05 level. All predictors were found to significantly and uniquely contribute to prediction of parasocial interaction. Attitude homophily had a significant influence on parasocial interaction ( $\beta = .318$ ;  $t = 4.593$ ,  $p < .001$ ), as well as social attractiveness ( $\beta = .282$ ;  $t = 3.881$ ,  $p < .001$ ), and physical attractiveness ( $\beta = .282$ ;  $t = 3.998$ ,  $p < .001$ ).

As hypothesized, the respondents who think they are similar to Mark Wiens tended to have positive parasocial interaction with Mark Wiens. Similarly, the respondents who think that Mark Wiens is socially attractive and is physically attractive tended to have positive parasocial interaction with Mark Wiens.

**TABLE 3.** Results of Linear Regression Analysis

| Predictor              | Dependent Variable         | $R^2$ (df) | B    | S.E. | Beta | t        |
|------------------------|----------------------------|------------|------|------|------|----------|
| Parasocial Interaction | Country Image              | .06<br>(1) | .353 | .111 | .255 | 3.176**  |
| Parasocial Interaction | Vlogger-viewer Imagery Fit | .48<br>(1) | .257 | .022 | .692 | 11.531** |

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Based on the Linear Regression Analysis results shown in Table 3,  $F(1, 145) = 10.08$ ,  $p < .002$ ,  $R^2 = .06$ .  $R^2$  referred to the amount of variance in country image explained by parasocial interaction, which is considered small (6%). However, parasocial interaction was a significant predictor of country image, ( $\beta = .255$ ;  $t = 3.176$ ,  $p < .002$ ). In addition, Table 3 shows Linear Regression Analysis results that found the  $R^2 = .48$ , referring to parasocial

interaction accounts for 48% of the variance in vlogger-viewer imagery fit. The overall regression model was statistically significant (significant at level .005),  $F(1, 145) = 132.96$ ,  $p < .005$  and Coefficients Table: ( $\beta = .692$ ;  $t = 11.531$ ,  $p < .005$ ). Therefore, there is a significant influence of Indonesian viewers' parasocial interaction on their vlogger-viewer imagery fit. As hypothesized, the respondents who engaged more in parasocial interaction with Mark Wiens tended to have more imagery fit where they see themselves similar to other viewers of Mark Wiens's vlogs.

Based on the Multiple Regression Analysis results shown in Table 2, the  $R^2 = .30$ , taken as a set, country image of Thailand and vlogger-viewer imagery fit account for 30% of the variance in travel intention. The overall regression model was statistically significant,  $F(2, 143) = 30.1$ ,  $p < .001$ . The coefficients table looks at each predictor individually with significant at .005 level. Country image of Thailand ( $\beta = .278$ ;  $t = 3.947$ ,  $p < .001$ ) and vlogger-viewer imagery fit ( $\beta = .442$ ;  $t = 6.265$ ,  $p < .001$ ) were found to significantly and individually influence parasocial interaction. As hypothesized, the more the respondents think that their image is similar to Mark Wiens's viewer's image, the higher their travel intentions to Thailand. Similarly, the more positive the perceived country image of Thailand, the higher their travel intentions to Thailand.

In addition to testing research hypotheses, Independent T-Test Analysis was conducted to find out whether there are significant differences of perceived country image and their travel intentions to Thailand between respondents who have ever visited Thailand and those who have never been to Thailand. Its results showed that those who have ever visited Thailand had significantly perceived country image ( $\bar{X} = 4.21$ ,  $S.D. = 6.30$ ) than those who have never been to Thailand ( $\bar{X} = 3.83$ ,  $S.D. = 6.72$ ),  $t(145) = 5.35$ ,  $p < .001$ . However, there was no significant difference in the reported travel intentions between those who have ever visited Thailand ( $\bar{X} = 4.09$ ,  $S.D. = 2.37$ ) and those who have never been to Thailand ( $\bar{X} = 4.11$ ,  $S.D. = 2.14$ ),  $t(144) = -.171$ ,  $p = .864$  ( $p > .05$ ).

The results showed significant influences among the examined variables. The results were also found to support the research hypotheses as proposed in the conceptual framework of this research. Social attractiveness, physical attractiveness, and attitude homophily of Mark Wiens have significant influences on Indonesian viewers' parasocial interaction. Indonesian viewers' parasocial interaction also has significant influence on their perceived country image of Thailand and their vlogger-viewer imagery fit. Similarly, both their perceived country image of Thailand and their vlogger-viewer imagery fit have significant influences on their travel intentions to Thailand.

## DISCUSSIONS

The research model that is borrowed and developed from the business research conducted by Lee's and Watkins (2016) is suitable to be applied as conceptual framework on communication research related to the influences of parasocial interaction between Mark Wiens's travel vlogs and Indonesian viewers on their travel intentions to Thailand. Their research examined how vlogs influence consumer perceptions of luxury brands using par-

asocial interaction. Their research findings have indicated social attractiveness/attitude homophily (as one predictor) to have a strong influence on parasocial interaction ( $\beta = .84$ ). This is consistent to Rubin and McHugh's research (1987) which found that the more attractive a media personality is, the more likely the viewer is to think they hold similar beliefs (attitude homophily).

In addition, the physical attractiveness was found to have a significant influence on parasocial interaction, but its influence on parasocial interaction was weaker ( $\beta = .08$ ) than social attractiveness/attitude homophily. This conclusion is consistent with prior studies of parasocial interaction that indicate social attractiveness as more correlated with parasocial interaction than physical attractiveness (Frederick et al., 2012). However, in the case on Mark Wiens, social attractiveness and physical attractiveness both have the same level of influence on parasocial interaction ( $\beta = .28$ ) because in this research, attitude homophily and social attractiveness were set as two different predictors, while attitude homophily has slightly stronger influence on parasocial interaction ( $\beta = .32$ ).

Brand-user-imagery fit that is explained by Miller and Mills (2012, pp. 1474) as the overall assessment of the compatibility or match between themselves and users of the brand, was adjusted to be vlogger-viewer imagery fit that refers to the overall assessment of the compatibility of match between the Indonesian viewers and other viewers of Mark Wiens's vlogs. As hypothesized, the respondents who engaged more in parasocial interaction with Mark Wiens tended to have imagery fit of the respondents as viewers with typical Mark Wiens's viewers. This is consistent with Lee's research where parasocial interaction has a positive influence on luxury brand perceptions which include brand value, brand luxury, and brand-user imagery fit.

With regard to the influence of parasocial interaction on perceived country image, the findings showed a weak influence. It should be noted that 43.8% of the samples traveled to Thailand with satisfying visit before. It is consistent with Punnahitanond's research (2018, pp. 101) that found 71.5% of the sample visited Thailand at least once, and that 67.8% of them were satisfied with their past visit to Thailand. In her study, although there is a significant influence of audiences' exposure to media portrayal of the Thai cave rescue on their intention to visit Thailand, the majority of the samples had direct positive experiences with Thailand that may influence their travel intentions. Therefore, the samples' travel experiences with Thailand moderate the influence of parasocial interaction on their perceived country image such that the influence of parasocial interaction on perceived country image among those with travel experiences in Thailand is stronger than its influence on perceived country image among those without travel experiences in Thailand.

This assumption is supported by the Independent T-Test Analysis results which showed a significant difference in the reported perceived country image between those who have ever visited Thailand ( $\bar{X} = 4.21$ , S.D. = 6.30) and those who have never been to Thailand ( $\bar{X} = 3.83$ , S.D. = 6.72),  $t(145) = 5.35$ ,  $p < .001$ . On the contrary, there was no significant difference in the reported travel intentions between those who have ever visited Thailand ( $\bar{X} = 4.09$ , S.D. = 2.37) and those who have never been to Thailand ( $\bar{X} = 4.11$ , S.D. = 2.14),  $t(144) = -.171$ ,  $p = .864$  ( $p > .05$ ).

With regard to the research hypotheses of this research, the findings have broadly confirmed the researcher's expectations. The travel vlogs do have influence on Indonesian viewers' parasocial interaction with Mark Wiens. The interaction is built from trust and connection, as well as a sense of similarity that the viewers have towards the vlogger. The similarity involves shared interest in traveling that gives a positive perception towards the vlogger. Indonesian viewers' parasocial interactions that have significant but weak influence on their perceived country image of Thailand indicated there is other factor beyond parasocial interaction with Mark Wiens also affect perceived country image of Thailand.

### **LIMITATIONS**

The number of respondents unfortunately did not achieve the expected sample size (three hundred respondents). Only half of 152 responses were collected as the sample. Another limitation that affected the number of samples resulted from lack of setting a required answer for all questions. Therefore, a few respondents had skipped some questions or left them blank. This caused the inconsistency on the number of samples in the findings of this study. Lastly, there was no control of respondents' past travel experience in Thailand. It is possible that beside parasocial interaction with Mark Wiens, respondents' direct positive experiences with visits to Thailand also affect their perceived country image of Thailand.

### **IMPLICATIONS**

The research provides some practical suggestions. First, to digital marketing practitioners, by enhancing their knowledge about social media marketing field that expands its coverage in businesses, such as endorsement. Selecting product endorsers should be supported by examining and comparing level of attractiveness and attitude homophily of several media influencers/media personalities on the parasocial interaction between them and their general audiences. Second, sharing benefits to an individual who wishes to be influencer in any of social media platforms by strategically managing parasocial interaction with their audiences on the attractiveness aspects (such as social and physical attractiveness that are key predictors of parasocial interaction). Thus, they can create a more engaged audience that will promote or encourage strong ties with their followers or fans. Third, this research can benefit policymakers and/or the government offices and institutions by promoting tourism through collaboration with popular vloggers. The Tourism Authority of Thailand, for example, can seek collaboration with foreign vloggers who are knowledgeable about Thailand and have strong connection with their fans through parasocial interaction because the contents related to country's tourism and parasocial interaction can have significant influence on viewers' perceived country image, which in turn, influence their intentions to visit Thailand.

The emergence of connecting with media personalities through social media has sparked a new area of academic research on parasocial interaction. Research comparing potential influences of parasocial interaction among different types of influencers such as celebrities, YouTubers, and vloggers on audiences' purchasing behavior should enhance the pool of knowledge in marketing communication. This could be applied for future research, such

as on the relationship between parasocial interaction and vloggers that may be investigated in other products or services or other business sectors as well. Lastly, it is also recommended to study about parasocial interaction between media personalities and viewers on a live-streaming feature where the interaction is real-time such as online sale content, live gaming, or giveaway.

### **ACKNOWLEDGEMENTS**

This research was supported by Graduate School, Bangkok University, Thailand, and was supervised by Associate Professor Dr. Ratanasuda Punnahitanond, Director, Master's and Doctoral Program in Communication Arts, Bangkok University.

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# **CELEBRITY ENDORSEMENT IN ADVERTISING AND CONSUMERS' BRAND PERCEPTION: A CASE STUDY OF VIVO THAILAND**

by

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## **ABSTRACT**

This article investigates how celebrity endorsement affects Vivo Thailand consumers' perception of the brand, based on the source credibility model. It was hypothesized that endorsers' trustworthiness, attractiveness, and expertise had a positive impact towards consumers' brand perception to Vivo Thailand. These hypotheses were tested by conducting online survey with 200 respondents in Thailand. Expertise explained the dimensions of professional, knowledgeable, and experienced. Trustworthiness explained the dimensions of unbiased, sincere, and reliable. Attractiveness explained the dimensions of good-looking, eye-catching, and familiar. Significant results were deduced to enforce the hypotheses that the celebrity endorsers' attractiveness, expertise, and credibility had a significant impact on consumers' brand perception. The research concluded that the consumers' opinions regarding Vivo advertising that featured celebrity endorsers mainly relied on endorsers' trustworthiness. Moreover, perceived attractiveness and expertise also came into play, respectively. Celebrity endorsers' trustworthiness, attractiveness, and expertise, respectively, affected the consumers' perception towards the brand in the aspect of good brand, trendiness, and high technology. The results of this research have provided insightful recommendations for technological brands that aim to enter Thai markets. Managerial implications indicates that the use of Thai celebrity endorsers affects the persuasiveness of advertising for consumers in Thailand. Moreover, the factors of attractiveness, expertise, and credibility of Thai celebrity endorsers can potentially induce positive brand perception among consumers in Thailand.

**KEY WORDS:** Celebrity Endorsement, Brand Perception, Source Credibility Model, Vivo, Thailand



## INTRODUCTION

The smartphone markets in Thailand are highly competitive. In the Thai markets, Chinese smartphone brands like Xiaomi, Huawei, Oppo, and Vivo occupy more than 50% of the market share, while Apple, Samsung, and other brands share another 50% (Statcounter, 2021). In the 4th quarter of the year 2020, the supply of smartphone was not enough to keep up with the demand, affecting the 10.5% market decline. Vivo managed to be the top player that could ensure enough stock, in particular, for the low-end Y-series models (IDC, 2021). Vivo appeared in the Thai smartphone markets only a few years ago. In 2011, Vivo released its first smartphone, the Vivo X1. In 2014, the Vivo brand began to expand the market overseas (Insight Research Telecom, 2016), including Thailand, Myanmar, Indonesia, India, Malaysia, Vietnam, and the Philippines.

Vivo chose Thailand as the first country in the overseas markets. According to the Global Digital Report 2019 survey which was conducted by HootSuite and WeAreSocial, there are 49 million mobile social media users in Thailand, accounting for 71% of mobile users (Leesa-Nguansuk, 2019a). In other words, the average daily time spent by Thai users on their smartphones has increased. Thai people spent 9.11 hours on the Internet per day, 3.44 hours watching television per day, and 1.30 hours listening to streaming music per day (Leesa-Nguansuk, 2019b).

Celebrity endorsement has been one of the most effective marketing communication strategies used among Thai marketers. Supported by Pornpitakpan (2004), traditional celebrities serve as reliable sources of information for countries with collectivistic cultural orientation than the countries with more individualistic cultural orientation. In particular, the fierce competition among international smartphone brands requires influential faces to endorse the products (Mostert, Petzer, & Weideman, 2016). For example, Samsung Galaxy S10 endorsed by Lisa Manoban (Blackpink), OPPO F5 endorsed by Yaya Urassaya Sperbund, and Huawei Nova 3 series endorsed by Bella Ranee Campen. These foreign smartphone brands have used celebrity endorsers to successfully enter Thai markets. Vivo has also relied on the advertising strategy of using celebrity endorsement to attract target consumers.

Extant research regarding celebrity endorsement in Thailand provided different results for different product categories. Wongweeranonchai and McClelland (2016) suggested that endorsers' perceived attractiveness and perceived expertise positively affect purchase intention. Thongpuangthip (2017) claimed that the endorsers' attractiveness, trustworthiness, and expertise tend to have a direct effect on household remedies brand equity in Thailand. Jittimitre (2015) found that the endorsers of skincare products' attractiveness, uniqueness, trustworthiness, and brand relevancy have a positive impact towards skincare endorser credibility. Among the dimensions, celebrity's attractiveness has the highest impact on skin care endorsers' credibility. However, no research to date, to the knowledge of the authors, has examined the effects of celebrity endorsement in advertising by smartphone brands towards the brand perception of Thai consumers. This research expands the literature of celebrity endorsement (Ohanian, 1990) by exploring Vivo advertising by Vivo

Thailand as the case study for the Chinese smartphone brands that entered the Thai markets. This research asked the follow questions:

RQ1. Does the expertise of Thai celebrities endorsed in Vivo Thailand advertising create positive brand perception to Vivo Thailand?

RQ2. Does the trustworthiness of Thai celebrities endorsed in Vivo Thailand advertising create positive brand perception to Vivo Thailand?

RQ3. Does the attractiveness of Thai celebrities endorsed in Vivo Thailand advertising create positive brand perception to Vivo Thailand?

## **LITERATURE REVIEW**

### **Celebrity Endorsement**

The celebrity endorser is defined as any individual who enjoys public recognition and who uses this recognition on behalf of a consumer good by appearing with it in an advertisement (McCracken, 1989). Celebrity refers not only to the usual movie and television stars, but also to individuals in sports, politics, business, arts, and military (McCracken, 1989). In advertising, celebrities as brand spokespersons have become a popular marketing communication strategy (Erdogan, 1999), which is conducive to the formation of a good brand image in the minds of consumers (Erdogan et al., 2001). The strategy which is known as “celebrity endorsement” is characterized by the use of distinctive personal images in advertisements to promote products (Rifon et al., 2016). Celebrity endorsement is designed to attract and maintain the attention of the consumers as much as possible (Banerjee & Siddhanta, 2015). Therefore, choosing the right endorser can help any brands stand out from the crowd and get the brands noticed.

McCracken (1989) pointed out that celebrity endorsement takes place in a series of stages. In the first stage, celebrities are endowed with certain symbolic significance from certain cultural environment, that is, celebrities form certain images and become symbols of certain gender, age, social status, personality, or lifestyle. In the second stage, celebrities and commodities appear in advertisements simultaneously, and the symbolic significance of celebrities shifts to commodities. In the third stage, consumers use products, obtain symbolic meaning, and reconstruct their self-image. Till and Busler (1998) believed that the information conveyed by the celebrity image should be consistent with the product information, so as to effectively communicate.

Atkin et al. (1983) highlighted several reasons why a well-known endorser might be influential. They draw buyers’ attention from the clutter of information streams to advertising, enhance product image, and amplify impact, and are seen as trustworthy. Friedman and Friedman (1979) proposed that the use of celebrity endorsers would make the product more credible, more favorable to the evaluation of the product and the advertisement, and the willingness to buy the product is higher than the use of non-celebrity endorsers in the

advertisement. Joseph (1982) believed that attractive celebrities also have a positive impact on product evaluation and opinions. Using attractive endorsers has a positive effect on brand attitude and purchase intention (Till & Busler, 1998).

### **Model of Source Credibility**

Ohanian (1990) constructed a scale to measure the expertise, trustworthiness and attractiveness of celebrities. The scale combines the original credibility model with the attractiveness model. Expertise includes the dimensions of knowledgeable, skilled, experienced, qualified and professional. Trustworthiness includes the dimensions of honest, trustworthy, sincere, reliable and dependable. Attractiveness includes the dimensions of familiar, likeable, and similar. The scale has become a milestone in the credibility measurement of studies regarding the celebrity endorsement.

Expertise refers to the relevant knowledge, experience, and skills a source possesses with regard to the subject matter of an endorsement (Hovland & Weiss, 1951). Expertise involves an endorser's knowledge, skills, and performance; it is readily acknowledged by consumers. A celebrity with relevant expertise is highly persuasive (Aaker, 1997) and increases brand recognition (Speck et al., 1988), thus, enhancing purchase intentions (Ohanian, 1991).

Trustworthiness refers to a source's honesty, credibility, and integrity (Erdogan, 1999). Trustworthiness is defined as the degree of confidence in the communicator's intent to communicate the assertions he or she considers most valid (Hovland et al., 1953). Evaluating a person's trustworthiness requires a substantial amount of information about the person (Rempel et al., 1985). This can be gained and reinforced through repeated communication and interaction.

The Source Attractiveness Model originates from McGuire's Source Valence Model (McGuire, 1985). It has attractiveness as the third component of source credibility. Attractiveness refers to the perceived attractiveness of the source (Ohanian, 1991). Source attractiveness in the context of message effectiveness (and communication) is said to depend on source's familiarity, likability, similarity, and overall attractiveness to the receivers (McGuire, 1985; Ohanian, 1991). Familiarity is considered knowledge of the source through exposure, whereas likeability is affection for the source as a result of the source's physical appearance and behavior, and similarity is the supposed resemblance between the source and the receiver of the message (McGuire, 1985).

### **Brand Perception**

According to Aaker (1991), a brand is the collection of a series of related cognition, thus, forming the differences among brands. Brand perception determines customers' expectations of the products related to the brand, i.e., how customers feel about the specific experience promised by the brand products (Herman, 2001). Moreover, the brand can also create unusual psychological effects and social benefits which are considered the most attributed to the illusion of customer experience. Herman (2001) refers to types of benefits were as value or additional value and emphasizes that customers want to gain additional

benefits on the basis of brand value. He adds that the realization of a brand strategy depends, on the one hand, on the alignment between brand values and promises and the way consumers perceive the brand. Therefore, the smaller the gap between brand value and promise and consumers' perceived brand value, the better the brand performance.

Jung and Kim (2015) argued that brand perception can be identified by different factors, such as, perceived product quality, brand knowledge, brand position, and brand symbolism. Perceived quality refers to consumers' evaluation about excellence or superiority of the brand. Brand knowledge refers to consumers' evaluation of technical information that was registered in consumers' memories. Brand position refers to how consumers perceive position or reputation about the brand. Brand symbolism refers to how consumers construct the identification about the brand by using symbols that reflect their self-concept.

In their research, Jung and Kim (2015) found that the only factor of brand perception that significantly affects brand identification is brand position. It refers to a value added in the product or service that makes the brand differentiate from competitors that "acts as intrinsic clue" (p. 2) to consumers' product evaluation and purchase decision (Kamakura & Russel, 1993). In the case of Vivo, the redefined brand's positioning focuses on technology and innovation that express the brand's vision of "enjoying the extraordinary" (Vivo, 2019, para. 1). Vivo represents "unique visual and creative spirit" (Vivo, 2019, para. 1) among global young consumers.

According to the review of related literature and past research, it leads to three hypotheses to test the significance between three independent variables with one dependent variable.

H1: Source credibility (trustworthiness) of Thai celebrities endorsed in Vivo Thailand advertising has a positive impact towards consumers' brand perception to Vivo Thailand.

H2: Source credibility (expertise) of Thai celebrities endorsed in Vivo Thailand advertising has a positive impact towards consumers' brand perception to Vivo Thailand.

H3: Source credibility (attractiveness) of Thai celebrities endorsed in Vivo Thailand advertising has a positive impact towards consumers' brand perception to Vivo Thailand.

## **METHOD**

### **Sampling Method**

This study relied on quantitative approach to explore the influence of source credibility of celebrities endorsed in Vivo Thailand advertising towards consumers' brand perception of Vivo Thailand. Quantitative research focuses on the collection of numerical data to explain generalizations or specific phenomena in a group of people (Babbie, 1983). The survey was based on a convenience sample of 200 respondents in Thailand. All of the respondents met the following criteria: respondents were 18 and above, had lived in Thailand for 5 years and above, they owned at least 1 smartphone, and they were fluent in English. They

had a certain degree of interest and understanding of electronic products. The rationale behind the criterion of the minimum of 5-year residence in Thailand was that Vivo Thailand entered the Thai markets five years ago. Since the questionnaire was in English, respondents were required to have a good command of English.

### **Questionnaire Design**

The authors used questionnaire for data collection process. As the questionnaire was written in English, the authors randomly distributed the questionnaire to 30 people who met the criteria mentioned in the aforementioned paragraph. The pilot test aimed to ensure that the words in the questionnaire were accurate, and would not make the respondents confused. The Cronbach's alpha coefficient of all 30 respondents is greater than 0.7. A value of 0.7 or 0.75 is often used as the cut-off value for Cronbach's alpha, indicating the reliability of the test (Christmann & Aelst, 2006). In other words, this questionnaire is regarded as reliable. After the pilot test, the questionnaire was randomly distributed to 200 respondents via online.

The survey questionnaire consisted of 4 parts: 1) Demographic information, 2) Smartphone use, 3) Consumers' opinions towards source credibility of endorsers in Vivo Thailand advertising, and 4) Brand perception. For the third part, the questionnaire included three dimensions: expertise, trustworthiness, and attractiveness. The respondents were asked to watch three Vivo advertising, all of which used different endorsers: Aum Patcharapa Chaichua (Thai famous actress), Peach Pachara Chirathivat (Thai famous actor), and BamBam Kunpimook Bhuwakul (Thai idol from famous Korean male idol group GOT7). The authors selected the highest viewing videos of each endorser, evidenced by numbers of views on YouTube. After watching the Vivo Thailand advertising, the respondents evaluated the consumers' opinions towards the source credibility of Thai celebrity endorsement in Vivo Thailand advertising. For the fourth part, the respondents were asked to evaluate the brand perception of the advertising viewers towards Vivo Thailand advertising. For the third and fourth parts, the measurement was based on five-point Likert scale—1 “strongly disagree,” 2 “disagree,” 3 “neutral,” 4 “agree,” and 5 “strongly agree.” The higher score means the more agreement.

### **Data Analysis**

The survey data was analyzed using SPSS Descriptive Statistics (frequency, percentage, and means scores). The criteria for the degrees of agreement dimension are as follows:

**TABLE 1.** Criteria for the degree of agreement dimension.

| Opinion toward the statement         | Score | Criteria    | Interpretation    |
|--------------------------------------|-------|-------------|-------------------|
| Strongly disagree with the statement | 1     | 1.00 - 1.80 | Strongly disagree |
| Disagree with the statement          | 2     | 1.81 - 2.60 | Disagree          |
| Neutral with the statement           | 3     | 2.61 - 3.40 | Neutral           |
| Agree with the statement             | 4     | 3.41 - 4.20 | Agree             |
| Strongly agree with the statement    | 5     | 4.21 - 5.00 | Strongly agree    |

## FINDING

The results in Table 2 showed that most of the respondents were female (85%,  $n = 170$ ), aged 18 - 25 years old (61.5%,  $n = 123$ ), and single (91%,  $n = 182$ ). They graduated with a Bachelor's degree (67.5%,  $n = 135$ ) and identified themselves as students (49.5%,  $n = 99$ ). They earned less than 10,000 THB (37%,  $n = 74$ ).

Regarding smartphone brands, most of respondents used iPhone (38%,  $n = 76$ ). Regarding smartphone information channels, respondents mostly received information about smartphone from social media (69%,  $n = 138$ ). Regarding reasons of purchasing the current smartphone, the respondents chose the brand because of good quality (48%,  $n = 96$ ). Regarding time use on smartphone, most of respondents kept the smartphone for 2-3 years (24%,  $n = 48$ ).

The result in Table 3 showed that respondents agreed with consumers' opinions towards source credibility (expertise, trustworthiness, attractiveness) of celebrities endorsed in Vivo Thailand advertising ( $\bar{x} = 4$ ). Mostly, the respondents agreed with the source credibility of the celebrities in the dimensions of attractiveness ( $\bar{x} = 4.12$ ), followed by expertise ( $\bar{x} = 4.10$ ) and trustworthiness ( $\bar{x} = 3.80$ ), respectively.

In respect to the dimensions of expertise, respondents strongly agreed with the statement of "The celebrity who endorses advertising of Vivo smartphone is professional" ( $\bar{x} = 4.21$ ). They agreed with the statement of "The celebrity who endorses advertising of Vivo smartphone is experienced" ( $\bar{x} = 4.11$ ) and "The celebrity who endorses advertising of Vivo smartphone is knowledgeable" ( $\bar{x} = 3.98$ ), respectively.

In respect to the dimensions of trustworthiness, respondents agreed with the statement of "The celebrity who endorses advertising of Vivo smartphone is reliable" ( $\bar{x} = 3.96$ ), followed by "The celebrity who endorses advertising of Vivo smartphone is sincere" ( $\bar{x} = 3.94$ ), and "The celebrity who endorses advertising of Vivo smartphone is biased" ( $\bar{x} = 3.5$ ), respectively.

In respect to the dimensions of attractiveness, respondents strongly agreed with the statement of "The celebrity who endorses advertising of Vivo smartphone is good looking" ( $\bar{x} = 4.26$ ). They agreed with the statement of "The celebrity who endorses advertising of Vi-

vo smartphone catches my eyes” ( $\bar{x} = 4.13$ ) and “The celebrity who endorses advertising of Vivo smartphone looks familiar” ( $\bar{x} = 3.96$ ), respectively.

**TABLE 2.** Profile of Survey Respondents (n = 200).

| <b>Item</b>                 | <b>Category</b>               | <b>Frequency</b> | <b>Percentage (%)</b> |
|-----------------------------|-------------------------------|------------------|-----------------------|
| <b>Gender</b>               | Female                        | 170              | 85.0%                 |
|                             | Male                          | 24               | 12.0%                 |
|                             | Prefer not to tell            | 6                | 3.0%                  |
| <b>Age (years)</b>          | 18-25                         | 123              | 61.5%                 |
|                             | 26-33                         | 40               | 20.0%                 |
|                             | 34-41                         | 27               | 13.5%                 |
|                             | 42-49                         | 4                | 2.0%                  |
|                             | 50 and over                   | 6                | 3.0%                  |
|                             |                               |                  |                       |
| <b>Education Level</b>      | Lower than high school        | 4                | 2.0%                  |
|                             | High school                   | 33               | 16.5%                 |
|                             | Bachelor’s degree             | 135              | 67.5%                 |
|                             | Master’s degree               | 25               | 12.5%                 |
|                             | Ph.D.                         | 3                | 1.5%                  |
| <b>Marital Status</b>       | Single                        | 182              | 91.0%                 |
|                             | Married                       | 15               | 7.5%                  |
| <b>Occupation</b>           | Separated                     | 3                | 1.5%                  |
|                             | Students                      | 99               | 49.5%                 |
|                             | Private organization employee | 37               | 18.5%                 |
|                             | Business owner                | 19               | 9.5%                  |
|                             | Government officer            | 14               | 7.0%                  |
|                             | Educator                      | 13               | 6.5%                  |
|                             | Freelancer                    | 11               | 5.5%                  |
|                             | Artist/Designer               | 1                | 0.5%                  |
|                             | Others                        | 6                | 3.0%                  |
| <b>Monthly Income (THB)</b> | Less than 10,000              | 74               | 37.0%                 |
|                             | 10,001-20,000                 | 48               | 24.0%                 |
|                             | 20,001-30,000                 | 41               | 20.5%                 |
|                             | 30,001-40,000                 | 13               | 6.5%                  |
|                             | 40,001-50,000                 | 7                | 3.5%                  |
|                             | 50,001-60,000                 | 9                | 4.5%                  |
|                             | 60,001 and above              | 8                | 4.0%                  |

**TABLE 3.** The Interpretation of Means and Standard Deviation of Survey Respondents Perceived the Expertise, Trustworthiness, and Attractiveness of Celebrities Endorsed in Vivo Thailand Advertising.

| <b>Source credibility<br/>(Expertise)</b>                                   | <b>Mean</b> | <b>Standard<br/>Deviation</b> | <b>Level</b>   |
|-----------------------------------------------------------------------------|-------------|-------------------------------|----------------|
| The celebrity who endorses advertising of Vivo smartphone is professional.  | 4.21        | .995                          | Strongly Agree |
| The celebrity who endorses advertising of Vivo smartphone is knowledgeable. | 3.98        | .982                          | Agree          |
| The celebrity who endorses advertising of Vivo smartphone is experienced.   | 4.11        | 1.049                         | Agree          |
| Total of expertise                                                          | 4.10        | .928                          | Agree          |
| <b>Source credibility<br/>(Trustworthiness)</b>                             | <b>Mean</b> | <b>Standard<br/>Deviation</b> | <b>Level</b>   |
| The celebrity who endorses advertising of Vivo smartphone is unbiased.      | 3.50        | 1.089                         | Agree          |
| The celebrity who endorses advertising of Vivo smartphone is sincere.       | 3.94        | 1.078                         | Agree          |
| The celebrity who endorses advertising of Vivo smartphone is reliable.      | 3.96        | 1.086                         | Agree          |
| Total of trustworthiness                                                    | 3.80        | .969                          | Agree          |
| <b>Source credibility<br/>(Attractiveness)</b>                              | <b>Mean</b> | <b>Standard<br/>Deviation</b> | <b>Level</b>   |
| The celebrity who endorses advertising of Vivo smartphone is good looking.  | 4.26        | 1.061                         | Strongly Agree |
| The celebrity who endorses advertising of Vivo smartphone catches my eyes.  | 4.13        | 1.093                         | Agree          |
| The celebrity who endorses advertising of Vivo smartphone looks familiar.   | 3.96        | 1.153                         | Agree          |
| <b>Total of attractiveness</b>                                              | <b>4.12</b> | <b>1.007</b>                  | <b>Agree</b>   |
| <b>Total</b>                                                                | <b>4</b>    | <b>.872</b>                   | <b>Agree</b>   |

Brand perception was measured in three dimensions based on its core positioning, which were, good products, trendy brand, and high-technological brand. Respondents agreed with the statement of “Vivo usually provides good products” ( $\bar{x} = 3.8$ ), followed by “Vivo is a trendy brand” ( $\bar{x} = 3.78$ ) and “Vivo is a high-technological brand” ( $\bar{x} = 3.71$ ), respectively.

A multiple regression was used to analyze the hypotheses between independent variables (expertise, trustworthiness, attractiveness), and dependent variable (consumers’ opinion towards brand perception to Vivo Thailand endorsed by celebrities). The results of hypotheses testing were in the following table.



H1: Source credibility (trustworthiness) of Thai celebrities endorsed in Vivo Thailand advertising has positive impact towards consumers' brand perception to Vivo Thailand.

H2: Source credibility (expertise) of Thai celebrities endorsed in Vivo Thailand advertising has positive impact towards consumers' brand perception to Vivo Thailand.

H3: Source credibility (attractiveness) of Thai celebrities endorsed in Vivo Thailand advertising has positive impact towards consumers' brand perception to Vivo Thailand.

**TABLE 4.** The Interpretation of Means and Standard Deviation of Survey Respondents Perceived Brand Perception of Celebrities Endorsed in Vivo Thailand Advertising.

| <b>Brand Perception</b>              | <b>Mean</b> | <b>Standard Deviation</b> | <b>Level</b> |
|--------------------------------------|-------------|---------------------------|--------------|
| Vivo usually provides good products. | 3.80        | .956                      | Agree        |
| Vivo is a trendy brand.              | 3.78        | 1.063                     | Agree        |
| Vivo is a high-technological brand.  | 3.71        | .97                       | Agree        |
| <b>Total</b>                         | <b>3.76</b> | <b>.872</b>               | <b>Agree</b> |

In SPSS, standard multiple regression was used to analyze hypotheses 1-3 which used source credibility (expertise, trustworthiness and attractiveness) as independent variables, and brand perception as a dependent variable.

As shown Table 5, Regression analysis revealed that celebrity endorsement had a significant effect on consumers' perception towards Vivo Thailand ( $R^2 = 0.583^{**}$ ,  $p < 0.05$ ). When examining each dimension of source credibility model, the findings found that perception of trustworthiness had the highest influence ( $Beta = 0.328^{**}$ ,  $p < 0.05$ ), followed by attractiveness ( $Beta = 0.312^{**}$ ,  $p < 0.05$ ) and expertise ( $Beta = 0.205^{**}$ ,  $p < 0.05$ ). Hypotheses 1, 2 and 3 were fully supported.

## **DISCUSSION AND CONCLUSION**

The research explored the influence of source credibility of celebrities endorsed in Vivo Thailand advertising towards its consumers' brand perception to Vivo Thailand. The data was collected from 200 survey responses. It was analyzed by SPSS for a descriptive analysis and a multiple regression analysis. This research sheds light on the celebrity endorsement advertising by the smartphone brand that are imported from other countries. Mainly, the three endorsers' attractiveness, expertise, and trustworthiness have an impact on consumers' brand perception in the case of Vivo Thailand.

**TABLE 5.** Regression Analysis on The Influence of Source Credibility on The Perception of Vivo Thailand.

| <b>Regression Analysis Table</b>                                                                              |                             |            |                           |       |       |
|---------------------------------------------------------------------------------------------------------------|-----------------------------|------------|---------------------------|-------|-------|
| Model                                                                                                         | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig.  |
|                                                                                                               | B                           | Std. Error | Beta                      |       |       |
| (Constant)                                                                                                    | 0.647                       | 0.197      |                           | 3.281 | 0.001 |
| Expertise                                                                                                     | 0.199                       | 0.069      | 0.205                     | 2.882 | 0.004 |
| Trustworthiness                                                                                               | 0.304                       | 0.066      | 0.328                     | 4.586 | 0.000 |
| Attractiveness                                                                                                | 0.279                       | 0.069      | 0.312                     | 4.062 | 0.000 |
| 1. Predictors: (Constant), Expertise, Trustworthiness, Attractiveness                                         |                             |            |                           |       |       |
| 2. Dependent Variable: brand perception towards Vivo Thailand, $R^2 = 0.583^{**}$ , $p < 0.05$ , $F = 91.235$ |                             |            |                           |       |       |

The results indicated that the trustworthiness, attractiveness, and expertise of Thai celebrities featured in Vivo Thailand advertising (Aum Patcharapa Chaichua, Peach Pachara Chirathivat, BamBam Kunpimook Bhuwakul (GOT7)) had an impact to the respondents towards brand perception to Vivo Thailand, respectively.

The results showed that celebrity endorsers' trustworthiness greatly influenced consumers' brand perception to Vivo Thailand. Hovland et al. (1953) defined trustworthiness as the degree of confidence in the communicator's intent to communicate the assertions he or she considers most valid. As Miller and Baseheart (1989) suggested, the more trustworthy a communicator is, the more effective their opinion will be to the receiver of that message. The findings of this study aligned with those of Pornpitakpan (2004) research in that traditional celebrities serve as reliable sources of information for countries with collectivistic cultural orientation than the countries with more individualistic cultural orientation. Jittimitre (2015) and Thongpuangthip (2017) also found that the endorsers' trustworthiness tends to affect brand perception in the household remedies and skin care products in Thai markets, respectively.

In addition to trustworthiness, celebrity endorsers' attractiveness also had an influence on consumers' brand perception to Vivo Thailand. Ohanian (1990) describes physical attractiveness as a key element in one's initial judgment of another person (celebrity), whose appearance can influence and change people's opinions. Shimp (2000) further argued that attractiveness exceeds physical appearance to refer to personality properties, lifestyle characters, and another related dimensions. The more attractive an endorser looks; the more likely consumers are to buy the endorsed product. The findings of this study aligned with those of Thongpuangthip (2017) and Wongweeranonchai and McClelland (2016) in that physical attractiveness of endorsers is likely to change beliefs, in particular, Thai endorsers who endorse the product for Thai markets. Therefore, the three endorsers' attractiveness affects the persuasiveness of the Vivo advertising.

The results showed that celebrity endorsers' expertise also had an influence on consumers' brand perception to Vivo Thailand. Hovland and Weiss (1951) described expertise as knowledge, experience, and skills a source possesses regarding the subject matter of an endorsement. The dimension directly relate to the communication topic (Shimp, 2000). As Ross (1973) suggested, perceived credibility of the endorsers depends largely on the sufficient knowledge in a particular area of interest. A celebrity with relevant expertise is highly persuasive (Aaker, 1997) and increases brand recognition (Speck et al., 1988), thus, enhancing purchase intentions (Ohanian, 1991). Much research has proven that expertise is another dimension that plays a significant role in the initial judgement of Thai endorsers in Thai markets (Thongpuangthip, 2017; Wongweeranonchai & McClelland, 2016). The fact that expertise had the lowest influence on consumers' perception may be explained by Siemens et al. (2008) in that all of the celebrity endorsers may not have product expertise or "the expertise one has due to experience with the product" (para. 9). The effect of endorsing an incongruent product may result in the lower influence than trustworthiness and attractiveness.

### **LIMITATIONS**

There are some limitations in this research. First, this research relied on convenience sampling and the majority of respondents were female and aged 18 – 25 years old. The results, thus, may not represent consumers' opinions towards the advertising for other groups of people from more diverse genders and age groups. Second, this research asked respondents to watch Vivo advertising that features only three endorsers for different product lines. Thus, the inclusion of advertising that features more endorsers may create similar or different impact on the consumers.

### **RECOMMENDATIONS**

Up to the present, Vivo has been listed as one of the top smartphone brands by the world's most famous data research company IDC in recent years (IDC, 2020). The results of this research have provided insightful recommendations for technological brands that aim to enter Thai markets. First, the present study implies that the consumers' opinions regarding Vivo advertising that features celebrity endorses mainly rely on endorsers' perceived trustworthiness. Brands should consider trustworthiness as the major factor in selecting celebrity endorsers to endorse international brands that aim to enter Thai markets. Second, the present study suggests that by watching Vivo Thailand advertising featured by Thai celebrities, their trustworthiness, attractiveness, and expertise had an impact to the sample of the study towards brand perception to Vivo Thailand, respectively. Thus, brand should consider the use of Thai celebrity endorsers for brands that aim to enter Thai markets. Third, the selection of celebrity endorsers to promote technological brands should represent brand positioning. In the case of Vivo Thailand, the positioning of good-quality, trendiness and high-technology were represented by celebrity endorsers featured in Vivo advertising. The present study presents some insights into the area of celebrity endorsements and calls for further research into this area. The insights gained could provide an avenue for further research which aims to explore the effect of celebrity endorsement on other variables, such

as, purchase intentions, and brand equity. Moreover, further research may explore the effectiveness of celebrity endorsers by international brands that aim to enter markets in different countries.

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# FRAMING COSMETIC SURGERY: CONTENT ANALYSIS OF YOUTUBE VIDEOS BY INFLUENCERS

by

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## ABSTRACT

This article explores how cosmetic surgery was represented in YouTube videos. It examines portrayals of cosmetic surgery on 62 YouTube videos by 16 influencers. 7 aspects of the video content were coded: type of influencers, type of surgeries, types of issue category, reporting angles, types of main information sources, drivers for cosmetic surgery, and impact for cosmetic surgery. Results show that the majority of the videos focused on nose surgery content by using the case of patient issues that were reported by patients themselves. The benefit-focused frame dominated the sampled videos and the major driver of cosmetic surgery was to pursue ideal of beauty. The cosmetic surgery had a major impact on physical aspects, rather than psychological and social aspects of patients' lives. The article concludes that influencers expressed relatively positive attitude towards cosmetic surgery, evidenced by the use of benefit-focused frame as the major frame by all of the types of influencers. Implementation of online rule and regulations in each country could use the insight as a foundation to further explore how benefit-focused should be appropriately framed. Otherwise, overclaimed and misleading information may occur.

**KEY WORDS:** Content Analysis, Cosmetic Surgery, Influencers, Media Frame, YouTube



## INTRODUCTION

The cosmetic surgery trends have been a massive rise, evidenced by 11,363,569 total surgical procedures performed worldwide and 13,618,735 total nonsurgical procedures performed worldwide (ISAPS, 2019). The five most common surgical cosmetic procedures worldwide are breast augmentation, liposuction, eyelid surgery, abdominoplasty, and rhinoplasty. The five most common nonsurgical procedures performed worldwide are Botulinum toxin, hyaluronic acid, hair removal, nonsurgical fat reduction, and photo rejuvenation (ISAPS, 2019). The countries with the highest number of cosmetic procedures are led by the U.S. with 3,982,749 procedures (ISAPS, 2019). Cosmetic surgery undergo is mainly motivated by improvement of appearance and form (Chrysopoulou, 2018). Cosmetic surgery is generally associated with life opportunities and good relationships. In China, women are faced with fierce competition for job hunting, more people regard their physical appearance as a source of leverage and turn to cosmetic surgery to boost their resources for performance (Hua, 2009). In lines with Korean people's perspectives on cosmetic surgery, Korean people perceive cosmetic surgery in related to job opportunities, and popularity in terms of social relations (Ghotbi & Khalili, 2017). Therefore, the good-looking capital is necessary for life to thrive (Hua, 2009).

An important factor of cosmetic surgery undergo is driven by media exposure (Delinsky, 2005; Furnham & Levitas, 2012). The media exerts a strong influence on perception of face and body image. Body dissatisfaction could potentially occur when a person engages in appearance comparison through internalization of beauty ideals portrayed by the media (Thompson et al., 1999). K-pop culture and media advertising have become significant factors for the continued expansion of the cosmetic surgery industry. K-pop stars were selling not only cultural performance or products but also their good-looking appearances (Wang, 2015). Reality television played a role in influencing the body image of both young women and children (Uhls & Greenfield, 2011), in particular, the amount and frequency of time spent watching reality television show a positive impact on sexual attractiveness. Past research also indicated that watching even small amounts of music videos contributed to negative body image (Bell et al., 2007; Tiggemann & Slater, 2004).

Extant research on framing cosmetic surgery highlights benefit-focused and risk-focused in media content. Benefit-focused frame points out to ideal beauty achievement, ease of procedures, and innovation (Brooks, 2004; Cho, 2007; Crockett et al., 2007; Nabi, 2009) while risk-focused frame mainly highlights safety concern (Crockett et al., 2007). However, empirical works collected data from only news reports in the newspaper or on television (Cho, 2007), reality show television programs (Crockett et al., 2007; Nabi, 2009), and magazines (Brooks, 2004). While the cosmetic surgery frame has been examined using various forms of traditional media, less is known about how cosmetic surgery is framed in new media, such as, YouTube.

This research borrowed Sun et al. (2020)'s systematic examination of cosmetic surgery frame in Chinese news to examine portrayals of cosmetic surgery on 62 YouTube videos by 16 influencers. It mainly contributes a new perspective on cosmetic surgery frame by influencers on the YouTube platform. The research questions asked:

RQ1: How do influencers frame cosmetic surgery content for YouTube audiences?

RQ2: How do influencers from different categories frame cosmetic surgery content for YouTube audiences?

## **LITERATURE REVIEW**

### **Framing Literature**

Research demonstrating framing effects is theoretically and empirically problematic because of vague, inconsistent and “scattered conceptualization” (Entman, 1993) of the term framing. However, definitions of frame share major assumptions which are construction of reality within media accounts and shaping the public consciousness about the stories (Tuchman, 1978). Entman (1993) defined frame as “select some aspect of a perceived reality and make [it] more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (p. 52). News media brings public issues in the spotlight through framing, as framing can influence public understanding and new policies forming (Gitlin & Tuchman, 1980). News media frame public issues in different ways, such as, framing nanotechnology as progress and generic risk (Weaver et al., 2009), and framing breast cancer in terms of coping with its effects, personal experiences, and risk factors (Andsager & Powers, 2001).

### **Framing Cosmetic Surgery**

Cosmetic surgery has been portrayed in the news coverage and advertisements. Vogue, Harper’s Bazaar, US Weekly and People magazines from October 2001 to June 2003 positively depict cosmetic surgery (Brooks, 2004). Two dominant frames of cosmetic surgery were cosmetic surgery as new technology and candid first person accounts of cosmetic surgery. The first frame highlighted the narrative of cosmetic surgery as new technology which was associated with scientific wonder, innovation, and progress; casual accessibility; medical expertise and health. The second frame focused on candid accounts which were associated with courage and virtue; a gift or treat; independence and rebellion; common sense and pro-activity (Brooks, 2004).

In the newspaper or on television, safety issues were the primary concern, when it comes to the news reports (Cho, 2007). However, reality-based television program that features the makeover procedures portray cosmetic surgery procedures as relatively low risk (Nabi, 2009). Whether the frame is benefit- or risk-focused, some scholars found culture as an influencing factor. Traditional media frame by the Western media was rather benefit-focused. Goodman (2014) found that the coverage of cosmetic surgery in the Western media was likely to portray cosmetic surgery by using a benefit frame rather than a risk frame, such as, ideal beauty achievement, ease of procedures. A researcher claimed that

regular viewers of the popular Cosmetic Surgery Makeover TV programs tend to undergo cosmetic surgeries than lighter viewers (Crockett et al., 2007)

Traditional media frame by the Eastern media was rather risk-focused. Sun et al. (2020) proposed systematic examination of media framing of cosmetic surgery in Chinese news during 2000 – 2019. The study found the risks of cosmetic surgery was more frequently framed as opposed to its benefits. Interestingly, the coverage by commercial newspapers focused more on the benefits and less the risks, compared with the coverage by government-sponsored media. In terms of information source, the use of experts' quotes was most commonly found in the news.

## **Influencers**

Influencers are “everyday, ordinary Internet users who accumulate a relatively large following on blogs and social media through the textual and visual narration of their personal lives and lifestyles, engage with their following in digital and physical spaces, and monetize their following by integrating “advertorials” into their blog or social media posts” (Abidin, 2015a, para. 1). Influencers always share their daily life to their followers to for their posts are perceived as more “organic” than celebrities or actors, this making them more relatable to the everyday consumers watching their content. Influencers could monetize their content through advertorials. Most of them offered “highly personalized, opinion-laden promotions of products/services that influencers personally experience for a fee” (Abidin, 2015b, para. 9).

According to Ismai (2018) categorized influencers into 4 categories, which are, mega-influencers, macro-influencers, micro-influencers, and nano-influencers. To clarify, mega-influencers attract at least 1 million followers; macro-influencers have between 100,000 to 1 million followers; micro-influencers have between 1,000 to 100,000 followers; and nano-influencers have less than 1,000 followers.

In addition to the number of followers, other variables, such as monthly viewers, posting frequency, number of likes, interaction, and social aggregation rate (Booth & Matic, 2011) can be used to calculate the ranking of influencers. When it comes to influencers, macro influencers outperform micro influencers in terms of advertising effectiveness. Simultaneously, credibility is an important factor in achieving this goal. Influencers are more effective than celebrities, according to research, and macro-influencers are more effective than micro-influencers or celebrities (Verger, 2012).

## **YouTube**

YouTube is the world's top social media platform in terms of video-sharing, with more than 2 billion users from more than 100 countries (YouTube About, 2021). It is the second-most popular search engine after Google (Global Reach, 2020). YouTube audiences daily spend more than billion hour of videos watching video content on YouTube. Therefore, the YouTube phenomenon generates billions and billions of views every day (YouTube Official Blog, 2021).

Technologically afforded as a video-sharing platform, YouTube is considered a source of public health information (Vance et al., 2009). It hosts diverse video content that portrays the procedures and before vs after experiences. In particular, procedures and effects of cosmetic surgery are portrayed through vivid images and narratives (Vance et al., 2009). Wen et al. (2015) mainly chose YouTube as a platform to recruit videos about cosmetic surgery because of the availability of cosmetic surgery videos on YouTube, content diversity (e.g., procedures, benefits, risks of plastic surgery), and message source diversity (e.g., experts, patients). The research found that benefits of cosmetic surgery and expert sources were predominantly used in the videos. Typical-consumer sources or patients tended to generate interest in cosmetic surgeries than other types of message sources (Wen et al., 2015).

## **METHOD**

The authors used a quantitative method to explore how influencers framed cosmetic surgery. A content analysis 62 videos on YouTube by 16 influencers was conducted. Content analysis provided a systematic and objective means of describing and quantifying phenomena (Downe-Wamboldt, 1992). The method served the purpose of this research which aimed to reveal how cosmetic surgery was framed by influencers. 7 aspects of the video content were coded: type of influencers, type of surgeries, types of issue category, reporting angles, types of main information sources, drivers for cosmetic surgery, and impact for cosmetic surgery. The coding scheme was developed by Sun et al. (2020).

### **Sampling**

This study used purposive sampling as the author intended to choose members of the population to participate in the sample based on their judgment (Dudovskiy, 2018). Initially, the author used keywords to search for videos on YouTube. Examples of keywords were “influencers” “cosmetic surgery experience sharing,” and “plastic surgery people.” The results were shown based on the ranking of video views. The authors tracked the channels that the videos belonged to and numbers of the subscribers for each channel. The channels were owned by influencers who were surgeons, patients (who had direct experiences with the cosmetic surgery), and those who were interested in or had indirect experiences with the cosmetic surgery. They had a reputation on the Internet in terms of lifestyle, photography, traveling, fashion, music, dance and news. The influencers had between 346 and 1.14 million followers, meaning that they were categorized as mega-influencers, macro-influencer, micro-influencers, and nano-influencers. Their countries of origin ranged from Australia, China, South Korea, and U.S.A. Their videos were published between June 24, 2016 and December 12, 2020. Therefore, this study analyzed 62 YouTube videos by 16 influencers from YouTube.

### **Procedure**

The authors recruited 62 videos by 16 influencers on the YouTube platform (as shown in Table 1) because of many reasons. First, the content on YouTube is considered user-

generated content which refers to “the various types of media content produced for the public’s consumption, including images, videos, text, and power-point presentations” (Kaplan & Haenlein, 2010) by YouTube users. There is a divide between personal content creators who produce content on a regular basis and public content creators who have taken over YouTube and have become celebrities in their own rights (Simonsen, 2011). This research focused on analyzing the videos by creators who attracted a sizable of audiences. Second, YouTube channels foster diversity, evidenced by more than 2 billion users from more than 100 countries (YouTube About, 2021). This research aimed at recruiting user-generated content with the focus on cosmetic surgery from different sources. Therefore, the content on YouTube by surgeons, patients (who had direct experiences with the cosmetic surgery), and those who were interested in or had indirect experiences with the cosmetic surgery were available to be recruited.

**TABLE 1.** 16 YouTube Influencers.

| NO. | YouTube Page’s Name   | Country of Origin | Number of Subscribers |
|-----|-----------------------|-------------------|-----------------------|
| 1.  | Anthony Youn, MD      | America           | 1.14M                 |
| 2.  | Alana Arbucci         | America           | 498.0K                |
| 3.  | Cluam Sutherland      | Australia         | 253.0K                |
| 4.  | Yaki Wong             | China             | 242.0K                |
| 5.  | Lorry Hill            | America           | 160.0K                |
| 6.  | 愛美教主 Cherry Queen     | China             | 107.0K                |
| 7.  | 葉 SuJi                | China             | 34.0K                 |
| 8.  | Seoul Guide Medical   | South Korea       | 20.3K                 |
| 9.  | Sorry, it’s Jenni     | America           | 15.3K                 |
| 10. | Nissie 陳妮絲            | China             | 14.2K                 |
| 11. | 謝東穎整形外科               | China             | 4.4K                  |
| 12. | Haydie May Bird       | America           | 4.0K                  |
| 13. | 网红视频分享 Chinese Beauty | China             | 3.8K                  |
| 14. | 痣多馨 koko              | China             | 2.7K                  |
| 15. | Carey oppa            | China             | 1.5K                  |
| 16. | 蓝色飞扬 (Blue Fly)       | China             | 346                   |

A sample of 16 YouTube videos recruited for a pilot test. Two coders who were graduate students in the Master of Arts in Global Communication program at Bangkok University coded the videos to ensure intercoder reliability. They recorded the frequency of each element found in the videos in Microsoft Excel.

1. Coding scheme based on general information: influencers’ countries of origin, number of views, number of likes, and content of videos.
2. Coding scheme based on reviewed literature (Ismail, 2016; Sun et al., 2020): types of influencers, types of surgeries, issue category, reporting angles, types of main information sources, drivers for cosmetic surgery, and impact for cosmetic surgery.

## Coding Strategy

Coding techniques as shown in Table 2 were based on theories discussed in selections of the literature review. To clarify, RQ1 analyzed the cosmetic surgery frame by influencers on YouTube. The authors relied on the coding scheme based on type of surgeries, types of issue.

**TABLE 2.** Coding Scheme.

|                                   |                                 |      |
|-----------------------------------|---------------------------------|------|
| Influencers' Countries of Origin  | America                         | CO1  |
|                                   | Australia                       | CO2  |
|                                   | South Korea                     | CO3  |
|                                   | China                           | CO4  |
| Types of Content                  | Lifestyle                       | TC1  |
|                                   | Health                          | TC2  |
|                                   | News                            | TC3  |
|                                   | Fashion                         | TC4  |
|                                   | Acting                          | TC5  |
| Types of Surgeries                | Eye Surgery                     | TS1  |
|                                   | Butt Injections                 | TS2  |
|                                   | Eyelid Surgery                  | TS3  |
|                                   | Face Surgery                    | TS4  |
|                                   | Breast Surgery                  | TS5  |
|                                   | Botox Injections                | TS6  |
|                                   | Nose Surgery                    | TS7  |
|                                   | Filler Injections               | TS8  |
|                                   | Liposuction                     | TS9  |
|                                   | Lip Surgery                     | TS10 |
| Issue Category                    | Exemplars                       | IC1  |
|                                   | Case of Patients                | IC2  |
|                                   | Litigation                      | IC3  |
|                                   | Lawsuits                        | IC4  |
|                                   | Safety and Risk Concern         | IC5  |
|                                   | Popularity of Cosmetic Surgery  | IC6  |
| Reporting Angles                  | Benefit-Focused                 | RA1  |
|                                   | Risk-Focused                    | RA2  |
|                                   | Neutral                         | RA3  |
| Types of Main Information Sources | Experts                         | TIS1 |
|                                   | Patients                        | TIS2 |
|                                   | Other                           | TIS3 |
| Drivers for Cosmetic Surgery      | Help Career Development         | DCS1 |
|                                   | Pursue Domestic Ideal of Beauty | DCS2 |
|                                   | Influenced by Friends           | DCS3 |
| Impacts of Cosmetic Surgery       | Physical                        | ICS1 |
|                                   | Psychological                   | ICS2 |
|                                   | Social                          | ICS3 |

<sup>a</sup> Adapted from Sun et al. (2020); Ismail, 2016

category, reporting angles, types of main information sources, drivers for cosmetic surgery, and impact for cosmetic surgery (Sun et al., 2020). RQ2 compared the cosmetic surgery frame by different categories of influencers. The authors relied on Ismail (2016) which offered the following categories: mega-influencers, macro-influencers, micro-influencers, and nano-influencers.

## FINDING

A content analysis of 62 YouTube videos published between June 24, 2016, and December 19, 2020 by 16 influencers was conducted. Among 16 influencers who published videos on YouTube, most of the influencers were categorized as macro-influencers (50%) with 100,000 to 1 million followers accounted for the highest proportion, followed by mega-influencers (25.8%) with at least one million followers, micro-influencers (22.6%) with 1,000 to 100,000 followers, and nano-influencers (1.6%) with less than 1,000 followers as shown in Table 3.

**TABLE 3.** Categories of Influencers.

| Categories of Influencers                                         | No of Influencers | Percentage  | No of Posts | Percentage    |
|-------------------------------------------------------------------|-------------------|-------------|-------------|---------------|
| <b>Mega-Influencers</b><br><i>at least 1 million followers</i>    | 1                 | 6.3%        | 16          | 25.8%         |
| Anthony Youn, M                                                   |                   |             |             |               |
| <b>Macro-Influencers</b><br><i>100,000 to 1 million followers</i> | 8                 | 50.0%       | 31          | 50.0%         |
| orry Hill                                                         |                   |             |             |               |
| luam Sutherland                                                   |                   |             |             |               |
| lana Arbucci                                                      |                   |             |             |               |
| eoul Guide Medical                                                |                   |             |             |               |
| orry, It's jenni                                                  |                   |             |             |               |
| issie 陈妮丝                                                         |                   |             |             |               |
| 葉 SuJi                                                            |                   |             |             |               |
| Yaki Wong                                                         |                   |             |             |               |
| <b>Micro-Influencers</b><br><i>1,000 to 100,000 followers</i>     | 6                 | 37.4%       | 14          | 22.6%         |
| Haydie May Bird                                                   |                   |             |             |               |
| 网红视频分享 Chinese Beauty                                             |                   |             |             |               |
| 謝東穎整形外科                                                           |                   |             |             |               |
| Carey Oppa                                                        |                   |             |             |               |
| 痣多馨 Koko                                                          |                   |             |             |               |
| 愛美教主 Cherry Queen                                                 |                   |             |             |               |
| <b>Nano-Influencers</b><br><i>less than 1,000 followers</i>       | 1                 | 6.3%        | 1           | 1.6%          |
| 蓝色飞扬 (Blue Fly)                                                   |                   |             |             |               |
| <b>Total</b>                                                      | <b>16</b>         | <b>100%</b> | <b>62</b>   | <b>100.0%</b> |

Regarding types of content, the influencers created content that was health-oriented (44.2%), followed by lifestyle-oriented (35.0%), fashion-oriented (16.9%), acting-oriented (2.6%), and news-oriented (1.3%) as shown in Table 4.

**TABLE 4.** Frequency of Types of Content (n = 62).

| Types of Content | Frequency | Percentage (%) |
|------------------|-----------|----------------|
| Lifestyle        | 27        | 35.0%          |
| Health           | 34        | 44.2%          |
| News             | 1         | 1.3%           |
| Fashion          | 13        | 16.9%          |
| Acting           | 2         | 2.6%           |
| <b>Total</b>     | <b>77</b> | <b>100.0%</b>  |

*aMultiple counts permitted*

RQ1: How do influencers frame cosmetic surgery content for YouTube audiences?

Regarding types of surgeries, the influencers focused on nose surgery (21.8%), followed by face surgery (15.5%), Botox injections (14.6%), lip surgery (14.1%), filler injections (11.7%), eye surgery (6.8%), breast surgery (5.8%), butt injections (5.3%), liposuction (3.4%), and eyelid surgery (1.0%) as shown in Table 5.

**TABLE 5.** Frequency of Types of Surgeries (n = 62).

| Types of Surgeries | Frequency  | Percentage (%) |
|--------------------|------------|----------------|
| Eye Surgery        | 14         | 6.8%           |
| Butt Injections    | 11         | 5.3%           |
| Eyelid Surgery     | 2          | 1.0%           |
| Face Surgery       | 32         | 15.5%          |
| Breast Surgery     | 12         | 5.8%           |
| Botox Injections   | 30         | 14.6%          |
| Nose Surgery       | 45         | 21.8%          |
| Filler Injections  | 24         | 11.7%          |
| Liposuction        | 7          | 3.4%           |
| Lip Surgery        | 29         | 14.1%          |
| <b>Total</b>       | <b>206</b> | <b>100.0%</b>  |

*a Multiple counts permitted*

Regarding issue category, the influencers used case of patients (36.0%), followed by exemplars (28.0%), safety and risk concern (17.3%), popularity of cosmetic surgery (13.3%), lawsuits (4.7%), and litigation (0.7%) as shown in Table 6.



**TABLE 6.** Frequency of Issue Category (n = 62).

| <b>Issue Category</b>          | <b>Frequency</b> | <b>Percentage (%)</b> |
|--------------------------------|------------------|-----------------------|
| Exemplars                      | 42               | 28.0%                 |
| Cases of Patients              | 54               | 36.0%                 |
| Litigation                     | 1                | 0.7%                  |
| Lawsuits                       | 7                | 4.7%                  |
| Safety and Risk Concern        | 26               | 17.3%                 |
| Popularity of Cosmetic Surgery | 20               | 13.3%                 |
| <b>Total</b>                   | <b>150</b>       | <b>100.0%</b>         |

<sup>a</sup>Multiple counts permitted

Regarding reporting angles, the influencers reported the benefit-focused angles (64.9%), risk-focused angles (20.3%), and neutral angles (14.8%) as shown in Table 7.

**TABLE 7.** Frequency of Reporting Angles (n = 62).

| <b>Reporting Angles</b> | <b>Frequency</b> | <b>Percentage (%)</b> |
|-------------------------|------------------|-----------------------|
| Benefit-Focused         | 48               | 64.9%                 |
| Risk-Focused            | 15               | 20.3%                 |
| Neutral                 | 11               | 14.8%                 |
| <b>Total</b>            | <b>74</b>        | <b>100.0%</b>         |

<sup>a</sup>Multiple counts permitted

Regarding types of main information sources, the influencers showed that patients (48.4%), followed by the expert (29.7%), and other types of main information sources (21.9%) as shown in Table 8.

**TABLE 8.** Frequency of Main Information Sources (n = 62).

| <b>Types of Main Information Sources</b> | <b>Frequency</b> | <b>Percentage (%)</b> |
|------------------------------------------|------------------|-----------------------|
| Experts                                  | 19               | 29.7%                 |
| Patients                                 | 31               | 48.4%                 |
| Other                                    | 14               | 21.9%                 |
| <b>Total</b>                             | <b>64</b>        | <b>100.0%</b>         |

<sup>a</sup>Multiple counts permitted

Regarding drivers for cosmetic surgery, the influencers revealed that the factors that motivate people to undergo cosmetic surgery were pursue domestic ideal of beauty (73.4%), followed by help career at development (16.5%), and being influenced by friends (10.1%) as shown in Table 9.

**TABLE 9.** Frequency of Drivers for Cosmetic Surgery (n = 62).

| Drivers for Cosmetic Surgery    | Frequency | Percentage (%) |
|---------------------------------|-----------|----------------|
| Help Career Development         | 13        | 16.5%          |
| Pursue Domestic Ideal of Beauty | 58        | 73.4%          |
| Influenced by Friends           | 8         | 10.1%          |
| <b>Total</b>                    | <b>79</b> | <b>100.0%</b>  |

<sup>a</sup>Multiple counts permitted

Regarding impact for cosmetic surgery, the influencers focused on the physical impact (58.5%), followed by psychological impact (24.5%), and social impact (17.0%) as shown in Table 10.

**TABLE 10.** Frequency of Impact for Cosmetic Surgery (n = 62).

| Impact of Cosmetic Surgery | Frequency | Percentage (%) |
|----------------------------|-----------|----------------|
| Physical                   | 55        | 58.5%          |
| Psychological              | 23        | 24.5%          |
| Social                     | 16        | 17.0%          |
| <b>Total</b>               | <b>94</b> | <b>100.0%</b>  |

<sup>a</sup>Multiple counts permitted

RQ2: How do influencers from different categories frame cosmetic surgery content for YouTube audiences?

**TABLE 11.** Types of Surgeries Found in the Videos by Different Categories of Influencers.

| Types of Surgeries | Posts by<br>Mega-Influencers<br><sup>a</sup> n = 16 |              | Posts by<br>Macro-Influencers<br><sup>a</sup> n = 31 |              | Posts by<br>Micro-Influencers<br><sup>a</sup> n = 14 |              | Posts by<br>Nano-Influencers<br><sup>a</sup> n = 1 |              |
|--------------------|-----------------------------------------------------|--------------|------------------------------------------------------|--------------|------------------------------------------------------|--------------|----------------------------------------------------|--------------|
|                    | <sup>b</sup> n                                      | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                     | %            |
| Eye Surgery        | 1                                                   | 2.1          | 12                                                   | 10.1         | 0                                                    | 0            | 1                                                  | 12.5         |
| Butt Injections    | 3                                                   | 6.4          | 5                                                    | 4.2          | 2                                                    | 5.7          | 1                                                  | 12.5         |
| Eyelid Surgery     | 0                                                   | 0            | 1                                                    | 0.8          | 0                                                    | 0            | 1                                                  | 12.5         |
| Face Surgery       | 5                                                   | 10.6         | 18                                                   | 15.1         | 8                                                    | 22.9         | 1                                                  | 12.5         |
| Breast Surgery     | 1                                                   | 2.1          | 6                                                    | 5.1          | 4                                                    | 11.4         | 1                                                  | 12.5         |
| Botox Injections   | 8                                                   | 17.0         | 17                                                   | 14.2         | 7                                                    | 20.0         | 1                                                  | 12.5         |
| Nose Surgery       | 11                                                  | 23.4         | 24                                                   | 20.2         | 9                                                    | 25.7         | 1                                                  | 12.5         |
| Filler injections  | 8                                                   | 17.0         | 16                                                   | 13.4         | 0                                                    | 0            | 0                                                  | 0            |
| Liposuction        | 2                                                   | 4.3          | 5                                                    | 4.2          | 0                                                    | 0            | 0                                                  | 0            |
| Lip Surgery        | 8                                                   | 17.0         | 15                                                   | 12.6         | 5                                                    | 14.3         | 1                                                  | 12.5         |
| <b>Total</b>       | <b>47</b>                                           | <b>100.0</b> | <b>119</b>                                           | <b>100.0</b> | <b>35</b>                                            | <b>100.0</b> | <b>8</b>                                           | <b>100.0</b> |

<sup>a</sup>n = number of posts<sup>b</sup>n = numbers of Surgeries found in the videos<sup>c</sup>Multiple counts permitted

Table 11 shows types of surgeries found in the videos by different categories of influencers. Regarding types of surgeries appeared in the videos by mega-influencers, the influencers focused on nose surgery (23.4%), followed by Botox injections (17.0%), filler injections (17.0%), lip surgery (17.0%), face surgery (10.6%), butt injections (6.4%), liposuction (4.3%), eye surgery (2.1%), and breast surgery (1.6%).

Regarding types of surgeries appeared in the videos by macro-influencers, the influencers focused on nose surgery (20.2%), followed by face surgery (15.1%), Botox injections (14.2%), filler injections (13.4%), lip surgery (12.6%), eye surgery (10.1%), breast surgery (5.1%), butt injections (4.2%), liposuction (4.2%), and eyelid surgery (0.8%).

Regarding types of surgeries appeared in the videos by micro-influencers, the influencers focused on nose surgery (25.7%), followed by face surgery (22.9%), Botox injections (20%), lip surgery (14.3%), breast surgery (11.4%), and butt injections (5.7%).

Regarding types of surgeries appeared in the videos by nano-influencers, the influencers focused eye surgery, butt injections, eyelid surgery, face surgery, breast surgery, Botox injections, nose surgery, and lip surgery. Each type of surgeries was accounted for 12.5%.

**TABLE 12.** Issue Category Found in the Videos by Different Types of Influencers.

| Issue Category                    | Posts by<br>Mega-Influencers<br><sup>a</sup> n = 16 |              | Posts by<br>Macro-Influencers<br><sup>a</sup> n = 31 |              | Posts by<br>Micro-Influencers<br><sup>a</sup> n = 14 |              | Posts by<br>Nano-Influencers<br><sup>a</sup> n = 1 |              |
|-----------------------------------|-----------------------------------------------------|--------------|------------------------------------------------------|--------------|------------------------------------------------------|--------------|----------------------------------------------------|--------------|
|                                   | <sup>b</sup> n                                      | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                     | %            |
| Exemplars                         | 16                                                  | 38.1         | 23                                                   | 31.1         | 2                                                    | 7.1          | 1                                                  | 33.3         |
| Cases of Patients                 | 16                                                  | 38.1         | 24                                                   | 32.4         | 11                                                   | 39.3         | 0                                                  | 0            |
| Litigation                        | 0                                                   | 0            | 0                                                    | 0            | 0                                                    | 0            | 1                                                  | 33.3         |
| Lawsuits                          | 1                                                   | 2.4          | 5                                                    | 6.8          | 1                                                    | 3.6          | 0                                                  | 0            |
| Safety and Risk Concern           | 6                                                   | 14.3         | 13                                                   | 17.6         | 7                                                    | 25.0         | 0                                                  | 0            |
| Popularity of<br>Cosmetic Surgery | 3                                                   | 7.1          | 9                                                    | 12.2         | 7                                                    | 25.0         | 1                                                  | 33.3         |
| <b>Total</b>                      | <b>42</b>                                           | <b>100.0</b> | <b>74</b>                                            | <b>100.0</b> | <b>28</b>                                            | <b>100.0</b> | <b>3</b>                                           | <b>100.0</b> |

<sup>a</sup>n = number of posts

<sup>b</sup>n = numbers of Surgeries found in the videos

<sup>c</sup>Multiple counts permitted

Table 12 shows issue category found in the videos by different categories of influencers. Regarding issue category appeared in the videos by mega-influencers, the influencers used exemplars (38.1%) and cases of patients (38.1%), followed by safety and risk concern (14.3%), popularity of cosmetic domestic (7.1%), and lawsuits (2.4%).

Regarding issue category appeared in the videos by macro-influencers, the influencers used cases of patients (32.4%), followed by exemplars (31.1%), safety and risk concern (17.6%), popularity of cosmetic surgery (12.2%), and lawsuits (6.8%).

Regarding issue category appeared in the videos by micro-influencers, the influencers used cases of patients (39.3%), followed by safety and risk concern (25%) and popularity of cosmetic surgery (25%), exemplars (7.1%), and lawsuits (3.6%).

Regarding issue category appeared in the videos by nano-influencers, the influencers used exemplars, litigation, and popularity of cosmetic surgery. Each issue category was accounted for 33.3%.

**TABLE 13.** Reporting Angles Found in the Videos by Different Types of Influencers.

| Reporting Angles | Posts by<br>Mega-Influencers<br><sup>a</sup> n = 16 |              | Posts by<br>Macro-Influencers<br><sup>a</sup> n = 31 |              | Posts by<br>Micro-Influencers<br><sup>a</sup> n = 14 |              | Posts by<br>Nano-Influencers<br><sup>a</sup> n = 1 |              |
|------------------|-----------------------------------------------------|--------------|------------------------------------------------------|--------------|------------------------------------------------------|--------------|----------------------------------------------------|--------------|
|                  | <sup>b</sup> n                                      | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                     | %            |
| Benefit-Focused  | 15                                                  | 71.4         | 20                                                   | 80.0         | 13                                                   | 76.5         | 0                                                  | 0            |
| Risk-Focused     | 4                                                   | 19.0         | 6                                                    | 24.0         | 4                                                    | 23.5         | 1                                                  | 100.0        |
| Neutral          | 2                                                   | 9.5          | 9                                                    | 36.0         | 0                                                    | 0            | 0                                                  | 0            |
| <b>Total</b>     | <b>21</b>                                           | <b>100.0</b> | <b>25</b>                                            | <b>100.0</b> | <b>17</b>                                            | <b>100.0</b> | <b>1</b>                                           | <b>100.0</b> |

<sup>a</sup>n = number of posts

<sup>b</sup>n = numbers of Surgeries found in the videos

<sup>c</sup>Multiple counts permitted

Table 13 shows reporting angles found in the videos by different categories of influencers. Regarding reporting angles appeared in the videos by mega-influencers, the influencers reported benefit-focused (71.4%), followed by risk-focused (19.0%), and neutral (9.5%).

Regarding reporting angles appeared in the videos by macro-influencers, the influencers reported benefit-focused (80%), followed by neutral (36%), and risk-focused (24%).

Regarding reporting angles appeared in the videos by micro-influencers, the influencers reported benefit-focused (76.5%), and risk-focused (23.5%).

Regarding reporting angles appeared in the videos by nano-influencers, the influencers reported only risk-focused (100%).

**TABLE 14.** Types of Main Information Sources Found in the Videos by Different Types of Influencers.

| Types of<br>Main Information<br>Sources | Posts by<br>Mega-Influencers<br><sup>a</sup> <i>n</i> = 16 |              | Posts by<br>Macro-Influencers<br><sup>a</sup> <i>n</i> = 31 |              | Posts by<br>Micro-Influencers<br><sup>a</sup> <i>n</i> = 14 |              | Posts by<br>Nano-Influencers<br><sup>a</sup> <i>n</i> = 1 |              |
|-----------------------------------------|------------------------------------------------------------|--------------|-------------------------------------------------------------|--------------|-------------------------------------------------------------|--------------|-----------------------------------------------------------|--------------|
|                                         | <sup>b</sup> <i>n</i>                                      | %            | <sup>b</sup> <i>n</i>                                       | %            | <sup>b</sup> <i>n</i>                                       | %            | <sup>b</sup> <i>n</i>                                     | %            |
| Experts                                 | 16                                                         | 100          | 2                                                           | 6.1          | 0                                                           | 0            | 1                                                         | 33.3         |
| Patients                                | 0                                                          | 0            | 20                                                          | 60.6         | 10                                                          | 83.3         | 1                                                         | 33.3         |
| Other                                   | 0                                                          | 0            | 11                                                          | 33.3         | 2                                                           | 16.7         | 1                                                         | 33.3         |
| <b>Total</b>                            | <b>16</b>                                                  | <b>100.0</b> | <b>33</b>                                                   | <b>100.0</b> | <b>12</b>                                                   | <b>100.0</b> | <b>3</b>                                                  | <b>100.0</b> |

<sup>a</sup>*n* = number of posts

<sup>b</sup>*n* = numbers of Surgeries found in the videos

<sup>c</sup>Multiple counts permitted

Table 14 shows types of main information sources found in the videos by different categories of influencers.

Regarding types of main information sources appeared in the videos by mega-influencers, the influencers only focused on experts (100%).

Regarding types of main information sources appeared in the videos by macro-influencers, the influencers focused on patients (60.6%), followed by other (33.3%), and experts (6.1%).

Regarding types of main information sources appeared in the videos by micro-influencers, the influencers focused on patients (83.3%), and other (16.7%).

Regarding types of main information sources appeared in the videos by nano-influencers, the influencers focused on experts, patient, and other. Each type of main information sources was accounted for 33.3%.

**TABLE 15.** Drivers for Cosmetic Surgery Found in the Videos by Different Types of influencers.

| Drivers for<br>Cosmetic Surgery |          |          | Posts by<br>Mega-Influencers<br><sup>a</sup> n = 16 |              | Posts by<br>Macro-Influencers<br><sup>a</sup> n = 31 |              | Posts by<br>Micro-Influencers<br><sup>a</sup> n = 14 |              | Posts by<br>Nano-<br>Influencers<br><sup>a</sup> n = 1 |              |
|---------------------------------|----------|----------|-----------------------------------------------------|--------------|------------------------------------------------------|--------------|------------------------------------------------------|--------------|--------------------------------------------------------|--------------|
|                                 |          |          | <sup>b</sup> n                                      | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                         | %            |
| Help                            | Career   | Devel-   | 8                                                   | 32.0         | 4                                                    | 10.0         | 0                                                    | 0            | 1                                                      | 33.3         |
| opment                          |          |          |                                                     |              |                                                      |              |                                                      |              |                                                        |              |
| Pursue                          | Domestic | Ideal of | 16                                                  | 64.0         | 31                                                   | 77.5         | 10                                                   | 90.9         | 1                                                      | 33.3         |
| Beauty                          |          |          |                                                     |              |                                                      |              |                                                      |              |                                                        |              |
| Influenced by                   | Friends  |          | 1                                                   | 4.0          | 5                                                    | 12.5         | 1                                                    | 9.1          | 1                                                      | 33.3         |
| <b>Total</b>                    |          |          | <b>25</b>                                           | <b>100.0</b> | <b>40</b>                                            | <b>100.0</b> | <b>11</b>                                            | <b>100.0</b> | <b>3</b>                                               | <b>100.0</b> |

<sup>a</sup>n = number of posts

<sup>b</sup>n = numbers of Surgeries found in the videos

<sup>c</sup>Multiple counts permitted

Table 15 shows drivers for cosmetic surgery found in the videos by different categories of influencers.

Regarding drivers for cosmetic surgery in the videos by mega-influencers, the influencers revealed that the factors that motivated people to undergo cosmetic surgery were pursue domestic ideal of beauty (64%), followed by help career development (32%), and influenced by friends (4%).

Regarding drivers for cosmetic surgery in the videos by macro-influencers, the influencers revealed that the factors that motivated people to undergo cosmetic surgery were pursue domestic ideal of beauty (77.5%), followed by influenced by friends (12.5%), and help career development (10%).

Regarding drivers for cosmetic surgery in the videos by micro-influencers, the influencers revealed that the factors that motivated people to undergo cosmetic surgery were pursue domestic ideal of beauty (90.9%), and influenced by friends (9.1%).

Regarding drivers for cosmetic surgery in the videos by nano-influencers, the influencers revealed that the factors that motivated people to undergo cosmetic surgery were pursue domestic ideal of beauty, help career development, and influenced by friends. Each driver for cosmetic surgery was accounted for 33.3%.

**TABLE 16.** Impact for Cosmetic Surgery Found in the Videos by Different Types of Influencers.

| Impact for<br>Cosmetic Surgery | Posts by<br>Mega-Influencers<br><sup>a</sup> n = 16 |              | Posts by<br>Macro-Influencers<br><sup>a</sup> n = 31 |              | Posts by<br>Micro-Influencers<br><sup>a</sup> n = 14 |              | Posts by<br>Nano-Influencers<br><sup>a</sup> n = 1 |              |
|--------------------------------|-----------------------------------------------------|--------------|------------------------------------------------------|--------------|------------------------------------------------------|--------------|----------------------------------------------------|--------------|
|                                | <sup>b</sup> n                                      | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                       | %            | <sup>b</sup> n                                     | %            |
| Physical                       | 16                                                  | 59.2         | 27                                                   | 57.4         | 11                                                   | 64.7         | 1                                                  | 33.3         |
| Psychological                  | 4                                                   | 14.8         | 13                                                   | 27.7         | 5                                                    | 29.4         | 1                                                  | 33.3         |
| Social                         | 7                                                   | 25.9         | 7                                                    | 14.9         | 1                                                    | 5.9          | 1                                                  | 33.3         |
| <b>Total</b>                   | <b>27</b>                                           | <b>100.0</b> | <b>47</b>                                            | <b>100.0</b> | <b>17</b>                                            | <b>100.0</b> | <b>3</b>                                           | <b>100.0</b> |

<sup>a</sup>n = number of posts

<sup>b</sup>n = numbers of Surgeries found in the videos

<sup>c</sup>Multiple counts permitted

Table 16 shows impact for cosmetic surgery found in the videos by different categories of influencers.

Regarding impact for cosmetic surgery in the videos by mega-influencers, the influencers focused on physical impacts (59.2%), followed by social impacts (25.9%), and psychological impacts (14.8%).

Regarding impact for cosmetic surgery in the videos by macro-influencers, the influencers focused on physical impacts (57.4%), followed by psychological impacts (27.7%), and social impacts (14.9%).

Regarding impact for cosmetic surgery in the videos by micro-influencers, the influencers focused on physical impacts (64.7%), followed by psychological impacts (29.4%), and social impacts (5.9%).

Regarding impact for cosmetic surgery in the videos by nano-influencers, the influencers focused on physical impacts, psychological impacts, and social impacts. Each impact for cosmetic surgery was accounted for 33.3%.

## DISCUSSION AND CONCLUSION

**This research has provided insightful points to discuss as follows.**

Regarding RQ1, YouTube influencers mostly focused on nose surgery in their frame. Influencers expressed relatively positive attitude towards cosmetic surgery, evidenced by the use of benefit-focused frame as the major frame. The content was mainly reported by the patients themselves. The findings of this study differed from those of Cho (2007) and Sun et al. (2020) research in that the media tended to focus on safety issue, when it came to news coverage, and the framing depended on experts in its news reporting.

Content by YouTube influencers from diverse countries mainly relied on advertiser-friendly content guidelines which the following topics are not permitted: inappropriate language, violence,

adult content, shocking content, harmful or dangerous acts, hateful and derogatory content, recreational drugs and drug-related content (YouTube Help, n.d.). The cosmetic surgery content that was not categorized as inappropriate still appeared on YouTube. The findings of this study aligned with those of Wen et al. (2015) research in that video content contributed by surgeons or patients tended to focus on the benefits of cosmetic surgery than video content contributed by other parties.

However, the construction and application of the risk-focused frame and experts-focused frame in Chinese news reports (Cho, 2007; Sun et al., 2020) might be possibly affected by the restriction by the plastic service industry's regulatory policies. Due to numerous plastic surgery medical accidents in China, many policies have been issued to "standardize medical cosmetology services, promote the healthy development of medical cosmetology, and protect the legitimate rights and interests of medical practitioners" (Leadleo, 2019, para. 6). Medical treatment subjects are required to obtain Medical Institution Practicing License approved by the registration authority in order to conduct legal medical beauty services. Severe punishment applies to illegal medical beauty institutions and beauty practices, as well as illegal production and sales of chemicals that are part of the procedures of plastic surgeries (Leadleo, 2019; The Trend of Plastic, 2019). Therefore, the news reports lied primarily in the risks involved in the cosmetic surgery and expert opinions.

Regarding RQ2, YouTube influencers from different types built frame by using similar ways, as previously discussed in the aforementioned paragraph, except types of surgeries, issue category, and types of main information sources. Regarding types of surgery, mega-influencers, macro-influencers, and micro-influencers focused on nose surgery in their frame. However, nano-influencers focused on nose surgery, together with other types of surgery. Regarding issue category, mega-influencers and nano-influencers use exemplars. The findings of this study aligned with those of Sun et al. (2020) research in that Chinese media used exemplars as their main strategies to appeal to audiences. They potentially improved the vividness, coherence, and appeal of a message (Kim et al., 2012). However, macro-influencers and nano-influencers focused on cases of patients. YouTube influencers were likely to share their personal views or direct experiences on cosmetic surgery through their self-made films. The videos positively tended to promote cosmetic surgery (Wen et al., 2015).

The results of this research also showed that some types of influencers using more than one types of issue categories were observed. In the case of the mega-influencers, Anthony Youn, M who is an American plastic surgeon equally used both exemplars and cases of patients to frame cosmetic surgery content. One possible explanation is that surgeons or doctors appear qualified and credible to explain cosmetic surgery procedures and safety issues and share empirical cases of patients who show their consent to be shared about.

The results of this research also showed that the nano-influencer's video that was recruited mainly focused on the negative impact of cosmetic surgery. The video was filmed as an interview format. The influencer 蓝色飞扬 (Blue Fly) was interviewing a boss of web celebrity company who narrated her first cosmetic surgery at the age of 19 at an unlicensed plastic surgery hospital. The video content about her negative post-cosmetic surgery experiences and plastic surgery addiction yielded the results of multiple types of surgeries. Although only one of her videos was recruited due to the relevancy with cosmetic surgery content, the content of the nano-influencer's video added a different frame of cosmetic surgery to the results.

Overall, this research indicated that influencers framed cosmetic surgery more frequently in terms of its benefits as opposed to risks on YouTube videos. While surgeons used exemplars and cases of patients to frame the content, patients openly shared cases of themselves as patients who had un-



dergone plastic surgery. The videos by patients outnumbered the videos by experts. The major driver of cosmetic surgery was to pursue ideal of beauty. The cosmetic surgery had a major impact on physical aspects, rather than psychological and social aspects of patients' lives. The type of surgeries, issue category, reporting frames, source of information, driver for surgery, and the impact of cosmetic surgery employed in the cosmetic surgery videos on YouTube were each associated with the portrayals of cosmetic surgery in today world. A comparison of results among different types of influencers shows that despite having different numbers of followers, influencers tend to frame cosmetic surgery in a more positive light and relied on cases of patients. This trend has apparently reflected more public acceptance of cosmetic surgery. A comparison of this study and prior research shows that frame-building varies across media and culture. For example, the news report in China is restricted by policies and regulations. The news frame is reported in the light of safety concerns and used only experts' quotes. However, video content on YouTube allows for diverse content by diverse sources. This study has found that video content by influencers used more benefit-focused frame than risk-focused and neutral-focused frame.

### **LIMITATIONS**

This research has some limitations. First, the authors recruited videos from only one platform, which was YouTube. The selection limited the generalizability of these findings. Second, the authors did not select equal numbers of videos by each influencer as they did not produce equal numbers of videos regarding cosmetic surgery content. The results of this study could be different with the different ways of selecting videos. Third, this study focused on examining online media content in an online social network site where user-generated content is constantly created and removed. The results of the new study that relied on data recruited in the different periods may yield different results.

### **RECOMMENDATIONS**

This research has provided managerial implications for influencers, social media marketers, and advertising policy makers. First, brands and promotional activities associated with cosmetic surgery should focus on the surgical content that cosmetic surgery consumers are most worried about, such as, nose. Second, as media content regarding cosmetic surgery on YouTube is more benefit-focused frame that relied on the case of patients. Implementation of online rule and regulations in each country could use the insight as a foundation to further explore how benefit-focused should be appropriately framed. Otherwise, over-claimed and misleading information may occur. Further research should consider explore cosmetic frame in videos on other popular platforms, such as, Weibo and Facebook. Moreover, the results of this research show that the influencers mostly relied on the benefit-focused frame. Further research should further examine how benefit-focused frame is used in media content, in particular, by different types of influencers. Future research is needed to examine the effects of cosmetic frame by influencers towards their audiences.

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**A VEHICLE ROUTING PROBLEM WITH TIME WINDOW SOLVED BY GIS,  
CASE STUDY: AUTOMOTIVE PARTS COMPANY**

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## **ABSTRACT**

Nowadays, many organizations rely on transportation as their primary business activity. Scheduling the routes of delivery cargo is termed as the vehicle routing problem (VRP). The time window (TW) and other limitations must also be considered to make sure that does not break the limiting conditions. Optimal route scheduling reduces cost and increases operational efficiency. Geographic Information System (GIS) software was used to schedule the delivery route. GIS results were compared with the company solution and Excel Evolutionary Solver to find the optimal answer for route cost and distance minimization. Results of total route cost per day were 30,693.62 THB for the company solution, 29,698.28 THB for the Excel Evolutionary Solver, 24,817.13 THB for GIS with Non-reorder Stops, and the optimal solution of 24,674.72 THB for GIS with Reorder Stops. GIS with Reorder Stops also provided reasonable computational experimentation time as a practical program for solving the VRPTW.

**KEY WORDS:** Vehicle Routing Problem (VRP), Vehicle Routing Problem Time Window (VRPTW), Geographic Information System (GIS)

## INTRODUCTION

Nowadays, transportation is the main activity of many organizations. Therefore, route planning is required to optimize operational efficiency. However, it is not easy to plan delivery routes because many constraints must be considered. These include number of vehicles available at the depot, capacity of vehicles, time window and route length. This problem is known as the Vehicle Routing Problem (VRP) (Gruler et al., 2018). The VRP is classified as an NP-hard problem, meaning that the required solution time increases exorbitantly with size. Transportation cost is a variable company cost. Thus, optimizing delivery routes by minimizing transportation distance will reduce overall costs.

This paper compares methodologies for optimization of the Vehicle Routing Problem with Time Window (VRPTW). The theoretical background is described in the literature review, with a technical description of the methodologies presented in the research methodology section. Implementation solutions based on the selected case study (real-life problem) are presented in the results section.

### Research problem

Currently, cost of handling goods and cost of transportation are a significant cost of many companies. Automotive parts company (case study) is one of the companies that set up production bases in Thailand for produce the automotive parts and deliver its products to customer in Bangkok area. There are many customers located in different locations. Then, many constraints must be considered to schedule the route with the route cost minimization. The also company need the solution method that can reduce time during planning phase which it can provide an effective route cost reduction.

### Objectives

To minimize delivery route cost and distance to optimize efficiency

To compare delivery routes scheduling between the company solution, Microsoft Excel Evolutionary Solver and the Geographic Information System (GIS) program

To recommend a methodology for delivery route scheduling, with shortest distances for cost minimization of the automotive parts company

### Research scope

This research focused on the delivery routes of an automotive parts company in Thailand. Three methods to calculate the optimal VRPTW were compared as the company solution, Microsoft Excel with Evolutionary Solver and the Geographic Information System (GIS) with Non-reorder stops and Reorder stops. The automotive parts company used 40 delivery routes for automotive parts from a single depot to multiple destinations and back to the company depot, with multiperiod delivery settings and homogeneous vehicles. When scheduling delivery routes to visit customers who are only available in a specific time

window, the VRP must be solved with time windows (VRPTW). To find the optimal solution, this research solved the problem by switching the sequences of the 40 delivery routes. The main objectives were to optimize route cost by minimizing the distances of delivery routes that directly affected the variable cost of the automotive parts company. Backhauls were not considered in this research.

## **Definitions**

Route cost is the cost based on distance or travel time.

Time window is the time during which a shipment is delivered or picked up. This is very important in route scheduling.

The vehicle routing problem (VRP) is a combinatorial optimization problem related to a set of routes for a fleet of vehicles to deliver products to a given set of customers.

## **Contribution**

The main contributions of this paper are to reduce the time during planning phase and minimize cost of transportation. Especially, for the automotive parts company that have a lot of customers and the transportation cost seems to be the main cost that directly affected to operation cost. Effective vehicle routing can bring about the route cost reduction (fuel cost and operation cost). Therefore, route scheduling must be considered as a major method for enhancing company efficiency. Using ArcGIS is not only use to sequencing an effective route of transporting products of case study, but it also adaptable with other companies for scheduling route of vehicle with effective route planning, reducing planning time during the day of operation, supporting decision making process of supervisor with an effective and accuracy solutions. Therefore, it is important to reduce the route cost with an effective route scheduling as a guideline for improving delivery efficiency in the future.

## **LITERATURE REVIEW**

These days, the intense competition has resulted in improved routing efficiency to reduce route costs. Moreover, shorter delivery time is one of the benefits of having an effective route scheduling because it be able to meet the needs of customers (short waiting time). Seeing that shorter routes seem to reduce fuel cost and operation cost (reduced wages). Effectively problem solving in current situation requires a focus on timing variables and simple methodology that can provide a feasible solution. This methodology that we used in this paper could help not only the case study company, but also can adapt with other familiar case studies which wanted to minimize cost of delivery route by planning an effective route scheduling.

The VRP is an optimization problem concerning determining the shortest distance (or lowest cost) of delivery routes under limitations such as number of vehicles, capacity of vehicles and time window of delivery. The main aim of the VRP is to serve a set of customers located in different geographic locations that require different numbers of goods. Limita-



tions of vehicle capacity cannot be broken (Bruniecki et al., 2016). Some researchers solved the general VRP with the objective function to minimize cost of transportation (M. Fisher & R. Jaikumar, 1981) using a heterogeneous fleet of vehicles (Corberán et al., 2001). Moreover, some researchers studied multiple depots of VRP with limitations related to the entry points of some customers for a particular type of vehicle (Villegas et al., 2013). Some researchers solved the VRP based on real-life problems such as maximum length of the route, traffic conditions, characteristics of the transport network, specifics of cargo and specific time period (time windows) that significantly affected the time of pick-up and delivery of goods (VRPTW) (Bent & Hentenryck, 2006; Donati et al., 2008; Ho & Haugland, 2004; Hong & Park, 1999).

The VRPTW has a given time interval of delivery, the time window. Time windows are constraints that cannot be broken. For example; if a vehicle arrives too early at a stop, it has to wait until the time window opens, while it is unacceptable for vehicles to reach the location late (Cordeau et al., 1999). Many examples of VRPTW include distribution of goods from depot to customers, delivery service of supermarkets, postal deliveries and school bus routing.

## **Solution methods**

### ***Metaheuristics***

Metaheuristics are approximation methods for handling the VRPTW. These include simulated annealing (Chiang, W.C. & Russell, 1996; Tavakkoli-Moghaddam et al., 2011; Wang et al., 2015), tabu search (Ho & Haugland, 2004) and evolutionary algorithms (Bräysy, O., Dullaert, W. & Gendreau, 2004; Garcia-Najera & Bullinaria, 2011). Simulated annealing is an optimization method that depends on a probabilistic procedure to escape from the local optimal in a large search space (Ilhan, 2020). Tabu search is an optimization method that uses short-term and long-term memory to avoid cycling and structures the search in the solution spaces (Zhou et al., 2013). Evolutionary algorithms are similar to the process of natural evolution based on Darwin's theory. To improve solutions, the process of evolutionary algorithms starts with iterative selection, recombining the candidate and then mutating to encode solutions and obtain better solutions (Garcia-Najera & Bullinaria, 2011). For solving the VRPTW, Microsoft Excel with Evolutionary Solver is one of the popular programs based on an evolutionary algorithm. The program is developed with the theory of natural selection (similar to a genetic algorithm), which works well for reasonable scales of problems to find good solutions. The solution of Microsoft Excel Evolutionary Solver begins with a random population of sets of input values. A second population of offspring is then created from sets of input values that have results similar to the target value. The offspring of the second population is mutated and a better solution is presented. Excel Evolutionary Solver reduces costs as it is a free program. Excel Evolutionary Solver is a practical program and easy to implement with VRP. However, it is not suitable for people who are unfamiliar with the program because it uses mathematical formulae that can result in inaccurate solutions (Trautmann & Gnagi, 2016).

## GIS

GIS can be used to optimize the VRP as a new trend in solving routing problems that emerged as a result of the remarkable successes achieved by GIS in various domains (Parolo et al., 2009). However, traditional GIS brings only a part of the solution to inefficiency of the routing decision support system in handling spatial data. These days, technological developments have improved GIS for solving the VRPTW. Hence, a promising solution of GIS has been described and discussed by many authors (Chen et al., 2011; Gayialis & Tatsiopoulos, 2004). The program ArcGIS is developed based on the well-known Dijkstra algorithm to find the shortest paths from the starting location to the finishing location. There are two ways of solving the VRPTW, consisting of the exact shortest path and a hierarchical path solver to provide faster performance for solving the problem. One of the outstanding advantages of ArcGIS is that it can integrate with many types of data such as map and 3D scenes for solving problems and supporting decision-making (Tili et al., 2013). However, it is expensive software. The data set (map) is the most important and costly component of any GIS (Carrara et al., 1999).

## RESEARCH METHODOLOGY

### Data collection

Primary data were collected from in-depth interviews with entrepreneurs. Interview questions were related to the operation such as transport restrictions, delivery routes currently used to transport automotive spare parts and time restrictions.

Secondary data as location coordinates, location of depot, location of customers and route costs were supplied by the automotive parts company.

### Solution methods

ArcGIS is a software that works by program input of geographic information such as map images, satellite images, numbers and distances. Results from ArcGIS are usually highly accurate and can be applied to problems in many areas. ArcGIS has many benefits, especially environmental management, route planning and utilities management (Booth & Mitchell, 2001).

### Mathematical model

| Index | Definition     |
|-------|----------------|
| $i$   | Customer index |
| $j$   | Customer index |

All required parameters are present as follows:

| Parameter | Definition                                                                                              |
|-----------|---------------------------------------------------------------------------------------------------------|
| $G$       | Graph for solving VRPTW                                                                                 |
| $V$       | A fleet of vehicles                                                                                     |
| $C$       | A set of customers                                                                                      |
| $k$       | The vehicles available in a single depot                                                                |
| $Q$       | A maximum capacity of vehicle                                                                           |
| $N$       | The set of all vertices                                                                                 |
| $A$       | a direct relationship between the depot and the customers                                               |
| $c_{ij}$  | A route cost                                                                                            |
| $t_{ij}$  | A travel time                                                                                           |
| $q$       | A capacity of each vehicle                                                                              |
| $a_i$     | A time window that a vehicle must arrive at customer $a_i$ before $b_i$                                 |
| $b_i$     | A time window that a vehicle must arrive at customer $b_i$ after finished delivery at $a_i$             |
| $d_i$     | A demand of customer $i$                                                                                |
| $x$       | A decision variable                                                                                     |
| $s$       | A decision variable                                                                                     |
| $s_{ik}$  | Each vehicle $k$ starts delivery service to customer $i$                                                |
| $x_{ijk}$ | A decision variable equal to 1, if vehicle $k$ drives directly from vertex $i$ to $j$ . Otherwise, is 0 |

This section reviews the formulations of the VRPTW classic mathematical model followed (Cordeau et al., 1999).

We represent the problem using graph  $G(N)$ . Consider a fleet of vehicles  $V$  and a set of customers  $C = \{1, 2, \dots, n\}$  such that a positive demand is associated to each customer  $i \in C$ . To service these customers, we have to design routes for a fleet with  $k$  vehicles available in a single depot. Importantly, each route must start at the depot, visit a subset of customers and then return to the depot (the place that the vehicle departs). The depot is represented by the vertices  $0$  (starting at depot) and  $n + 1$  (returning to depot). Moreover, all customers must be visited once. Each vehicle has a maximum capacity  $Q$ , which limits the number of customers it can visit before returning to the depot. We assume a homogeneous fleet of vehicles based on the case study. The set of all vertices, that is  $0, 1, 2, \dots, n + 1$  is denoted  $N$ . The set of arcs,  $A$ , represents a direct relationship between the depot and the customers. Note that there are no arcs finishing at vertex  $0$  or starting from vertex  $n + 1$ . With each arc  $(i, j)$ , where  $i \neq j$ , we associate a cost as  $c_{ij}$  and a time as  $t_{ij}$ , which may include service time at customer  $i$ .

Each vehicle has a capacity  $q$  and each customer  $i$  a demand  $d_i$ . Each customer  $i$  has a time window  $[a_i, b_i]$  and a vehicle must arrive at customer  $a_i$  before  $b_i$ . If it arrives before the time window opens, it has to wait until  $a_i$  to service the customer. The time windows for both depots are assumed to be identical to  $[a_0, b_0]$  which represents the scheduling horizon. The vehicles cannot leave the depot before  $a_0$  and must return at the latest time at

time  $b_{n+1}$ . It is assumed that  $q, a_i, b_i, d_i, c_{ij}$  must be non-negative integers and  $t_{ij}$  must be positive integers.

The model constraints of decision variable  $x$  and  $s$ . For each arc  $(i, j)$ , where

$$i \neq j, i \neq n+1, j \neq 0 \text{ and each vehicle } k \text{ we define } x_{ijk} \text{ as}$$

$$x_{ijk} = \begin{cases} 1, & \text{if vehicle } k \text{ drives directly from vertex } i \text{ to } j, \\ 0, & \text{otherwise.} \end{cases}$$

The decision variable  $s_{ik}$  is defined for each vertex  $i$  and each vehicle  $k$  and denotes the time vehicle  $k$  starts delivery service to customer  $i$ . In case vehicle  $k$  does not service customer  $i$ ,  $s_{ik}$  has no meaning and thus its value is considered unrelated. We assume  $a_0 = 0$  and therefore  $s_{0k} = 0$ , for all  $k$ .

The main objective function is to design a set of routes that minimizes total route cost, such that

This informal VRPTW description can be modeled mathematically with time windows and capacity limitations as follows:

Objective function:

$$\min \sum_{k \in V} \sum_{i \in N} \sum_{j \in N} c_{ij} x_{ijk} \quad (1)$$

Subject to:

$$\sum_{k \in N} \sum_{j \in N} x_{ijk} = 1 \quad \forall i \in C \quad (2)$$

$$\sum_{i \in C} d_i \sum_{j \in N} x_{ijk} \leq q \quad \forall k \in V \quad (3)$$

$$\sum_{j \in N} x_{0jk} = 1 \quad \forall k \in V \quad (4)$$

$$\sum_{i \in N} x_{ihk} - \sum_{j \in N} x_{hjk} = 0 \quad \forall i \in C, \forall k \in V \quad (5)$$

$$\sum_{i \in N} x_{i,n+1,k} = 1 \quad \forall k \in V \quad (6)$$

$$x_{ihk} (s_{ik} + t_{ij} - s_{jk}) \leq 0 \quad \forall i, j \in N, \forall k \in V \quad (7)$$

$$a_i \leq s_{jk} \leq b_i \quad \forall i \in N, \forall k \in V \quad (8)$$

$$x_{ijk} \in \{0, 1\} \quad \forall i, j \in N, \forall k \in V \quad (9)$$

$$\sum_{j \in N} x_{0jk} \leq |V| \quad \forall k \in V, \forall j \in N \quad (10)$$

The objective function (1) minimizes the total route cost. The constraints (2) ensure that the vehicle visits each customer once, and (3) states that a vehicle cannot be loaded more than the maximum capacity. Next, equations (4), (5) and (6) ensure that each vehicle must start the delivery from the depot 0; after a vehicle arrives and finishes delivering products at a customer location it has to leave and go to next destination; and finally, all vehicles must finish the delivery at the depot  $n + 1$ . The constraint (7) states the relationship between the vehicle departure time from a customer and its immediate successor, while constraint (8) ensures that the time windows cannot be broken. Constraint (9) presents the integrality constraints. Note that an unused vehicle is modeled by driving the empty route  $(0, n + 1)$ . Constraint (10) ensures the upper bound on the number of vehicles. For each vehicle, the delivery service start variables set with a specific route direction in order to eliminate any subtours. This means each customer must be visit exactly once and also leave each city exactly once as constraint (2) and (5) (subtour elimination constraint).

### **Constraints**

Each customer is serviced by the vehicle once

Every route begins at company depot vertex 0 and ends at company depot at vertex  $n + 1$

The time windows of the customers and capacity constraints of the vehicles should be considered.

The capacity constraints of the vehicles are taken into account

Subtour elimination constraint

### **Implementation**

According to the case study, the location coordinates of customers and the depot location are input into the ArcGIS software. ArcGIS implementation was based on New Route Network Analyst with two functions to find the optimal solution as “Non-reorder Stops” and “Reorder Stops”.

The non-reorder stops are the function to sequencing the route without changing the sequence of customers. This means that the route of case study will change but the sequences of customers will not change. In contrast, reorder stops are the function that renew sequencing customers and also renew the routes. In more detail, the non-reorder and reorder stops are implemented with the same case study. Comparing between these two functions in order to find the proper method that can provide better solution. Noted that we used the sample of case study which used for the implementation with all methodologies in this paper.

The implementation was done with 40 routes based on the case study. Results of all methods were compared with the company daily route. Route scheduling of the company was

performed manually, which took a long-time during the planning phase. The implementation used ArcGIS on a personal computer with CPU Intel CORE i5-5200U, 2.7 GHz.

Noted that in this paper we do not consider with route cost minimization by reducing the number of vehicles. Due to the fact that the requirement of case study company wants to remain the same number of vehicles. Therefore, the route cost reduction in this paper is presented by the reduction of delivery distances, fuel consumption of vehicle, and renew the sequence of delivery.

**FIGURE 1: ArcGIS with New Route Network Analyst**

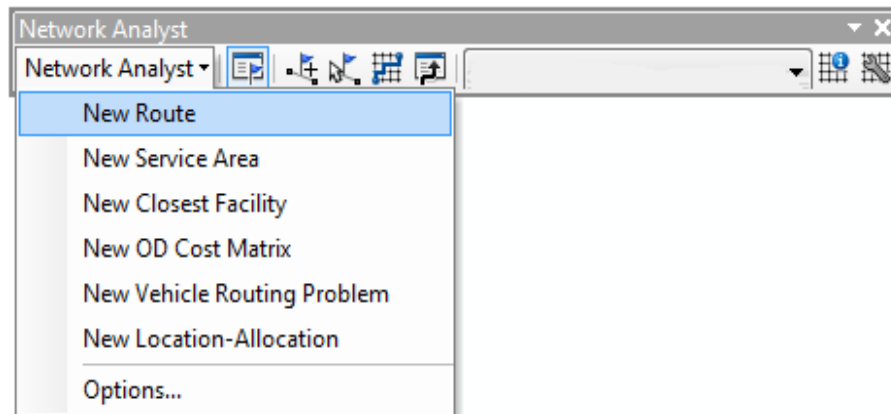


**FIGURE 2: ArcGIS Reorder Stops**

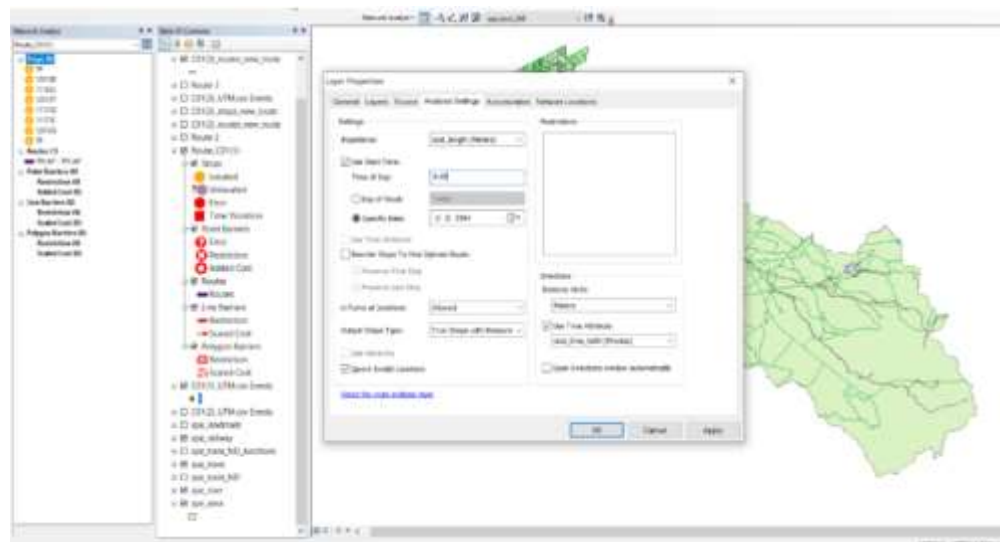


**FIGURE 3: ArcGIS Program**

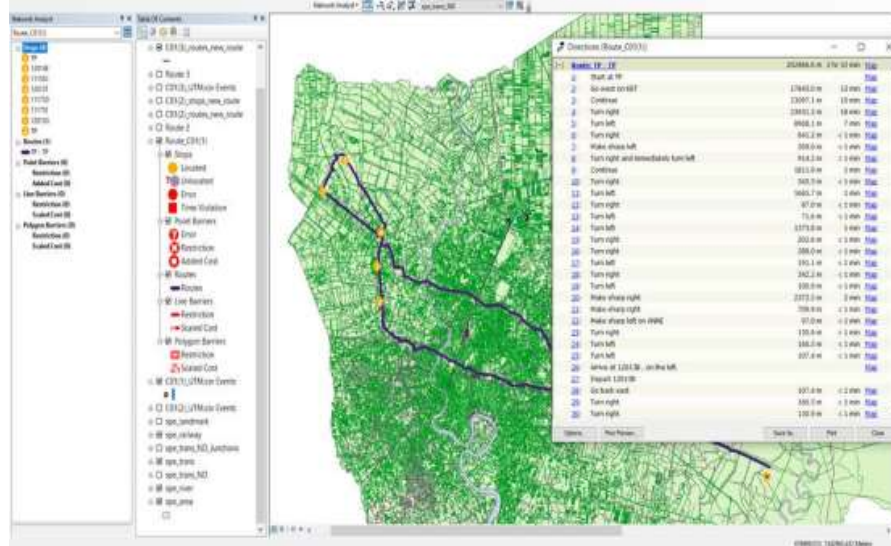


Figure 1 presents the ArcGIS program implemented with the function called “New Route Network Analyst”. The two types of methods implemented with this problem were GIS with Non-reorder Stops and GIS with Reorder Stops as presented in Figure 2. Significantly, ArcGIS displayed the map image for solving problems. This was easier for the user to use and schedule routes (Figure 3).

## RESULTS

Table 1 presents solutions of three case study routes by comparing the company solution with the other methods. Total route cost and distances are displayed for each route. GIS with Reorder Stops gave the optimal reduction of total distance and route cost.

An example of one case for comparing the results from Excel Evolutionary (figure 4), GIS Non-Reorder Stops (figure 5), and from GIS Reorder Stops (figure 6) are showed that the route scheduling by the implementation of GIS Reorder Stops seem to provide shortest route of delivery products. The route solution from the GIS Reorder Stops can reduce the fuel consumption more than other methods.

**TABLE 1.** Comparison of company solution with the other methodologies

|    | Company Solution |               |                  | Excel Evolutionary Solver |               |                  | GIS Non-Reorder Stops |               |                  | GIS Reorder Stops |               |                  |
|----|------------------|---------------|------------------|---------------------------|---------------|------------------|-----------------------|---------------|------------------|-------------------|---------------|------------------|
|    | Seq.             | Distance (km) | Route Cost (THB) | Seq.                      | Distance (km) | Route Cost (THB) | Seq.                  | Distance (km) | Route Cost (THB) | Seq.              | Distance (km) | Route Cost (THB) |
| 1A | 0                | 0             | 0                | 0                         | 0             | 0                | 0                     | 0             | 0                | 0                 | 0             | 0                |
|    | 1                | 61.5          | 280.43           | 3                         | 65.8          | 280.43           | 1                     | 46.29         | 225.92           | 2                 | 47.69         | 200.93           |
|    | 2                | 1.8           | 6.45             | 4                         | 4.5           | 6.45             | 2                     | 2.82          | 10.11            | 5                 | 9.42          | 33.76            |
|    | 3                | 3.9           | 13.98            | 5                         | 5.6           | 17.92            | 3                     | 0.95          | 3.41             | 4                 | 4.14          | 14.84            |
|    | 4                | 4.5           | 16.13            | 2                         | 11.9          | 25.45            | 4                     | 4.42          | 15.84            | 3                 | 4.42          | 15.84            |
|    | 5                | 5.6           | 20.07            | 1                         | 1.8           | 20.07            | 5                     | 4.14          | 14.84            | 1                 | 2.13          | 7.63             |
|    | 0                | 74.9          | 323.46           | 0                         | 61.5          | 265.85           | 0                     | 55.55         | 254.11           | 0                 | 46.29         | 195.92           |
|    | Total            | 152.2         | 660.52           | Total                     | 151.1         | 616.17           | Total                 | 114.17        | 524.23           | Total             | 114.09        | 468.92           |
| 1B | 0                | 0             | 0                | 0                         | 0             | 0                | 0                     | 0             | 0                | 0                 | 0             | 0                |
|    | 1                | 80.8          | 394.61           | 2                         | 80.5          | 393.54           | 1                     | 56.23         | 306.54           | 5                 | 55.01         | 302.17           |
|    | 2                | 3.1           | 11.11            | 4                         | 4.9           | 17.56            | 2                     | 2.55          | 9.14             | 3                 | 3.7           | 13.26            |
|    | 3                | 3.7           | 13.26            | 3                         | 4             | 14.34            | 3                     | 2.99          | 10.72            | 4                 | 1.5           | 5.38             |
|    | 4                | 4             | 14.34            | 1                         | 3.9           | 13.98            | 4                     | 1.47          | 5.27             | 2                 | 2.9           | 10.39            |
|    | 5                | 7.3           | 26.17            | 5                         | 2.2           | 7.89             | 5                     | 5.18          | 18.57            | 1                 | 2.5           | 8.96             |
|    | 0                | 74.3          | 371.31           | 0                         | 77.1          | 376.35           | 0                     | 55.08         | 302.42           | 0                 | 56.2          | 306.44           |
|    | Total            | 173.2         | 830.8            | Total                     | 172.6         | 823.66           | Total                 | 123.5         | 652.66           | Total             | 121.81        | 646.6            |
| 1C | 0                | 0             | 0                | 0                         | 0             | 0                | 0                     | 0             | 0                | 0                 | 0             | 0                |
|    | 1                | 68            | 243.73           | 3                         | 56.6          | 352.67           | 1                     | 55.08         | 247.42           | 4                 | 55.39         | 303.53           |
|    | 2                | 20.8          | 74.55            | 4                         | 20.8          | 30.11            | 2                     | 16.83         | 60.32            | 5                 | 4.93          | 17.67            |
|    | 3                | 29.4          | 105.38           | 5                         | 4.9           | 21.51            | 3                     | 19.61         | 70.29            | 3                 | 2.69          | 9.64             |
|    | 4                | 8.4           | 30.11            | 2                         | 8.4           | 21.51            | 4                     | 5             | 17.92            | 1                 | 3.26          | 11.68            |
|    | 5                | 6             | 21.51            | 1                         | 6             | 21.51            | 5                     | 4.93          | 17.67            | 2                 | 16.83         | 60.32            |
|    | 0                | 68.4          | 300.17           | 0                         | 68.4          | 144.63           | 0                     | 55.28         | 253.14           | 0                 | 45.29         | 212.33           |
|    | Total            | 201           | 775.45           | Total                     | 165.1         | 591.94           | Total                 | 156.73        | 666.76           | Total             | 128.39        | 615.17           |

**FIGURE 4:** An example of route scheduling by Excel Evolutionary Solver





**FIGURE 5:** An example of route scheduling by GIS Non-Reorder Stops

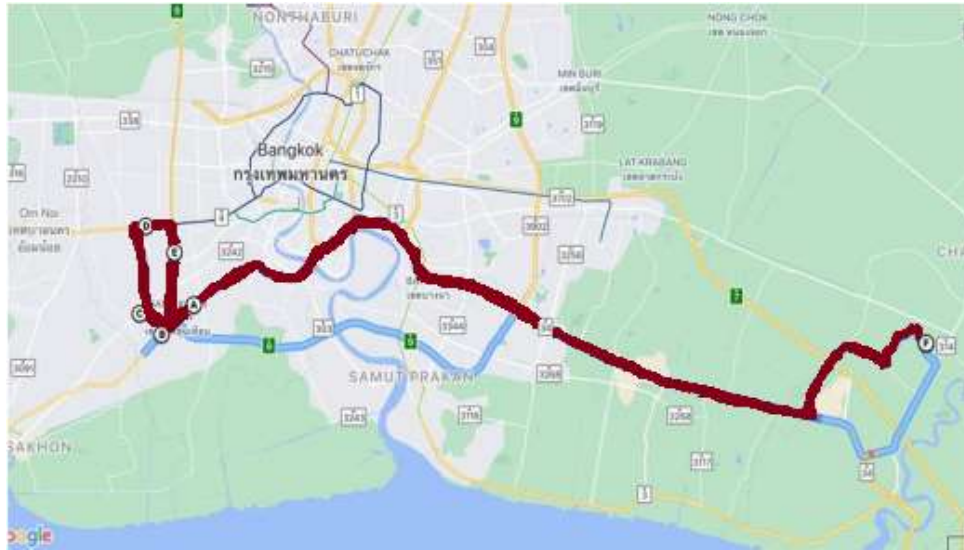
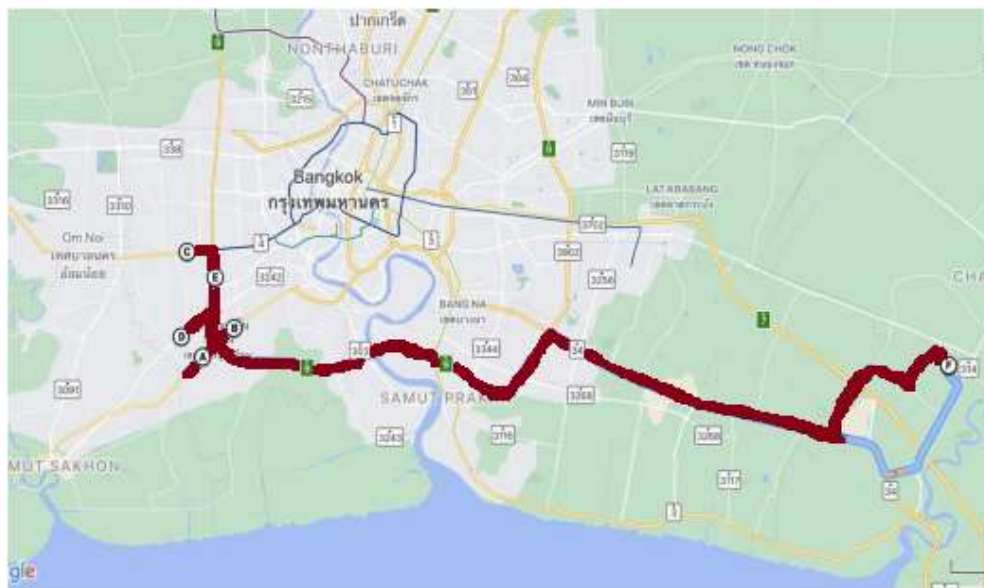


**FIGURE 6:** An example of route scheduling of GIS Reorder Stops



A comparison of total solution distances in kilometers by the four methods is presented in Figure 7. GIS with Reorder Stops reduced total delivery route distances more than the other methods. It reduced the total distance more than the company solution at 1707.23 km, and improved the company solution by 24.92%. The GIS with Reorder Stops improved the solution more than the Microsoft Excel Evolutionary Solver by decreasing the total distance by 1443.96 km or 21.92%. The solution of GIS with Reorder Stops reduced the total distance more than the GIS with Non-reorder Stops by 73.21 km or 1.40%.

Figure 8 compares route cost per day in Thai baht (THB) between the four solutions. Implementation of GIS with Reorder Stops gave the optimal solution at 24674.72 THB per day. The GIS with Reorder Stops decreased the route cost from the company solution at THB 6018.9 per day, which improved the route cost by 19.61%. The GIS with Reorder Stops presented a better solution by reducing the route cost more than the Microsoft Excel Evolutionary Solver by 16.92% (THB 5023.56 per day). The solution of route cost by the GIS with Reorder Stops decreased cost by 0.57% from the solution of GIS with Non-reorder Stops.

**FIGURE 7:** Comparison of total delivery route distances

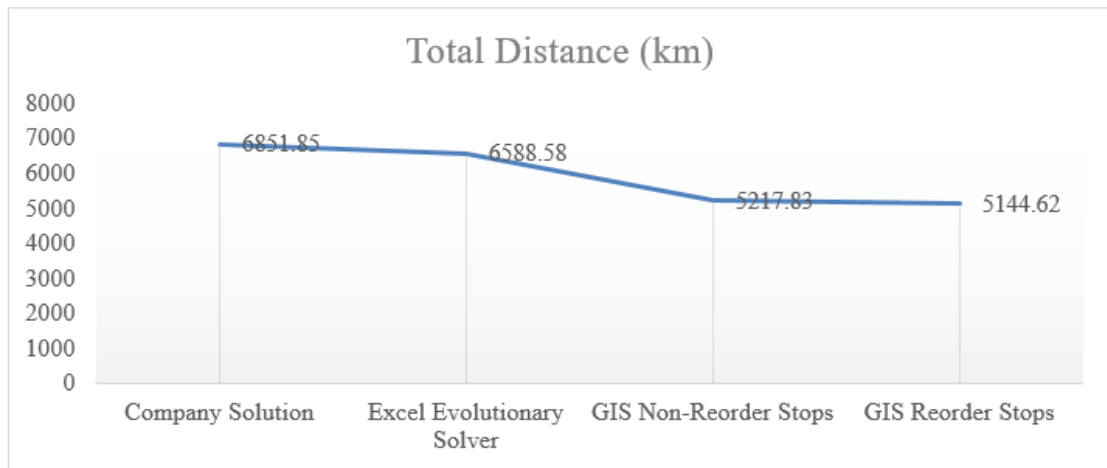
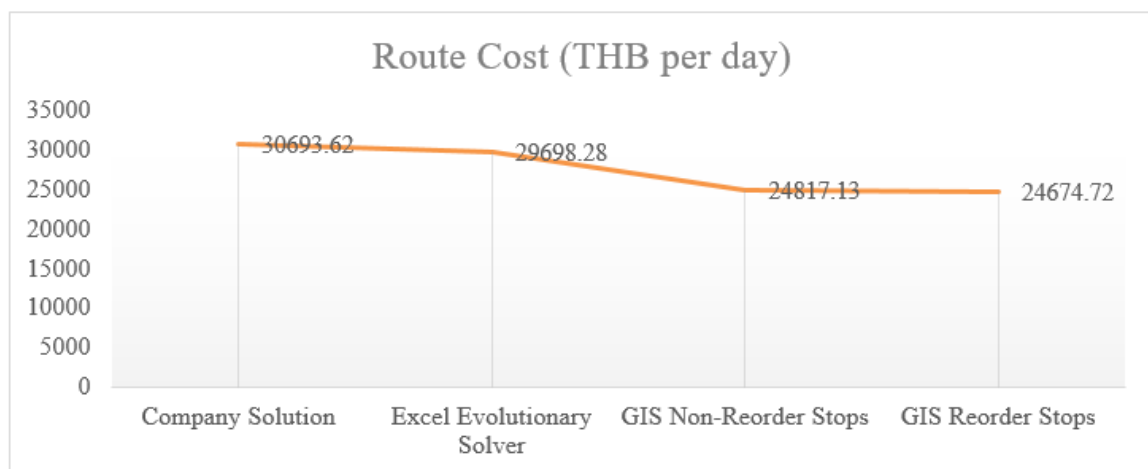


**FIGURE 8:** Comparison of total delivery route distances



Using Excel Evolutionary Solver is suitable in the simple case with a size scale of problem with a limited number of candidates. According to our case study, 40 routes are used for the experimentation. The Excel Evolutionary Solver can be used with this scale of problem

without any problem. In some cases, it overwhelmed by the dimensionality of problems (large scale of problems) to find the solutions which close to an optimal solution. Therefore, Excel Evolutionary Solver is not suitable for a hundred or a thousand decision variables or large size of problems. On the grounds that it cannot provide a result of optimal solution in all cases. However, it is proper for solving numerical optimization problems. Also, it seems to be very easy to implement. It can produce the global optimizations. Moreover, Excel Evolutionary is included the solver that the objective function and constraints are linear functions of the variables (Fylstra, 2021).

It is clearly seen that the outstanding solutions are presented from ArcGIS program. The algorithm of ArcGIS is developed based on Dijkstra algorithm, which it developed based on the shortest path algorithm (New Route) and the randomization method. In fact, ArcGIS uses a data structure for sequencing candidate of solutions based on distance from the beginning. Thus, the program is randomly selected candidate from the list of search space and loop until the shorter distance of delivery route of solution is found, proper sequence of customer is found, and updated the solution with better result. The ArcGIS can take into account the other constraints. The Arc GIS can use with the large size of data, so 40 routes of case study can be able to implement with this program. Therefore, the solution of customer sequence and route scheduling are displayed with a better result. Moreover, the solution is highly accurate and very fast to implementation (Hammer, 2002). Comparing with other methods, the GIS Reorder Stop can provide the outstanding solution. This is because the changing of customer's sequence is significantly affected with the distance of delivery. Consequently, if we changed the sequence of delivery, the distance in the transport will be decreased. As a result, the route cost is also decreased. This method could be benefits for decision making during route planning phase, reduce route cost, and increase proficiency of route scheduling with delivery distance reduction.

## CONCLUSION

The VRP is a combinatorial optimization problem that many companies face. Optimization of route scheduling minimizes route cost and travel distances. Route cost is directly related to the variable costs of the company and can be reduced by rescheduling to avoid road tolls and reduce fuel cost. Travel distance is directly related to fuel cost. Therefore, if the delivery distance reduces, fuel cost will also reduce.

In this research, Microsoft Excel Evolutionary Solver, GIS with Non-reorder Stops and GIS with Reorder Stops were the methodologies used to reschedule the delivery routes. Solutions from these three methods were compared with the daily delivery route of the company to find the optimal solution.

Results presented that the solution of GIS with Reorder Stops minimized the route cost and distances. For route cost, the GIS with Reorder Stops reduced route cost 19.61% more than the company solution, 16.92% more than the solution of Microsoft Excel Evolutionary Solver, and 0.57% more than the GIS with Non-reorder Stops. For distance minimization, GIS with Reorder Stops also provided the optimal distance reduction. The GIS with Reor-

der Stops decreased distance 24.92% more than the company solution, 21.92% more than Microsoft Excel Evolutionary Solver, and 1.40% more than the GIS with Non-reorder Stops.

Therefore, ArcGIS software proved that it was more efficient to solve the VRPTW than Microsoft Excel Evolutionary Solver and the company solution. Moreover, GIS used the input data of geographic location and map that related to the location of the problem and analyzed the data based on real location indicators. Thus, the solution from the GIS was accurate. Moreover, the GIS was easy for users to understand the sequences of the routes because the map presented the location and route guide as a proper route scheduling service.

The ArcGIS with New Route function by Reorder Stop can also apply with other similar case study that dealing with vehicle route scheduling for minimizing distance and cost. On the grounds that the program is worked on the shortest path algorithm. Thus, it provided and accurate solution with shorter delivery distance. Also, providing the reasonable time to implement. However, the ArcGIS is costly program but it seems to benefit in long-term investment. This is proper with many companies which wanted to enhance ability of planning vehicle routing and prevent failure in implement decisions.

## **RECOMMENDATIONS**

The ArcGIS is a suitable software to solve the VRPTW. It provided an accurate result with the geographic indicator and map image. The GIS with Reorder Stops function delivered a better solution than the other methods with reasonable time of implementation. The results of GIS with Reorder Stops presented the optimal reduction of route cost and delivery distance. However, the GIS is an expensive program with high initial cost of data installation and cost of maintenance. Moreover, the cost of ArcGIS also depends on the number of accounts of the user. Many account users lead to higher cost of program installation. Therefore, it would take a long time to reach the break event point. ArcGIS is suitable for long-term operation and can provide more choices for better decision-making in the planning phase.

The Microsoft Excel Evolutionary Solver also decreased the route cost and delivery distance more than the company solution. The company can use this to schedule the routes. It is a free program and provided a better solution. One limitation of the Microsoft Excel Evolutionary Solver is that it can only present the results in terms of numbers and graphs. It can be used if the company does not want to invest in the ArcGIS high-cost program. Future research should use GIS to solve the VRPTW with large data size. Methodologies for solving the stochastic VRPTW should also be assessed.

## **LIMITATIONS**

Limitations existed in the data used for the experimentation due to the confidential issues of a case study company on customer data. The company provided only the location of customer and sequence of route scheduling that the company currently used. Then, quantity of goods is assumed by the case study company with the same quantity in each location. Therefore, if we could get more relevant data, it will be able to take more advantage of during the implementation. In addition, it may bring more variety and can be used to sequencing the route in more realistic situation. To deal with this problem, the ArcGIS program can provide the solution with different quantity of goods.

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# **A SURVEY ON WEB-BASED MEETING MANAGEMENT SYSTEM**

by

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## **ABSTRACT**

Meeting is an important part of daily life to discuss and share information. There are different kind of methods, approaches, and techniques that have been used to hold meetings. But scheduling a meeting is not as easy as having a meeting. So, various types of scheduling applications consisting with different functionalities can be seen. Research methodology consists of a survey done with the participation of 82 responders. Descriptive statistic method was used for data analysis. According to results, identified there are problems arise while informing about meeting, sending meeting minute, scheduling meeting and selecting a convenient time. So, the main objective of this paper is to provide a proper solution for those identified problems by reducing too much paperwork. This research paper suggests a web based meeting management system to draw-up the current inefficient manual process of meeting management. Although this suggested solution will reduce the environmental impact due to the usage of too much papers. Hence, this scheduling application provides a huge advantage for all who hold meetings.

**KEY WORDS:** Meeting, Scheduling, Web-based, Application



## INTRODUCTION

The telecommunication industry is a highly dynamic industry that facilitates the improvement of the lifestyle of the rapid growing human race. In the past, due to the underdevelopment of the telecommunication field, it was difficult to conduct a meeting because of the poor communication among the people. As a result, problems like time wastage, difficulty in reaching the goals properly had to face. But with the advancement of technology, this changed almost completely. In today's world, every meeting in an organization is considered as important because goals can be achieved through verbal and written communication between the staff. Therefore, different kind of techniques and tools have been invented to accomplish a task of scheduling a meeting effectively. MeetingBird, Calendar, Google Calendar and Calendy are currently being used from email plugins to mobile apps and web based solutions that can be used anonymously. These meeting schedulers provide various functionalities by fulfilling the common goal.

As the person who in charge the meeting, it is important to know how to organize a meeting properly. Often traditional method is the most commonly used. In an organization, higher management gives the details about place, date, time and participants of the meeting to the secretary and asking to arrange the meeting. Then secretary prints the meeting minute and distribute or send an email to the relevant people. Sometimes, those participant people cannot make it to that time on the scheduled day and some important participants may not be able to attend. Behalf of that main issue, there are also other issues such as failing to send an email informing about the meeting, not sending the email to the right person and unable to send email before the meeting etc. Of course this process is a waste of time. Moreover, most people do not pay more attention when a meeting is notified on the notice board. Sometimes meeting venue is changed by a meeting notice and some people come to previously announced venue by following the original meeting notice. Moreover, some attendees forget about the meeting because of no one sending a meeting reminder. Therefore, this study specially focuses on find solutions when arising the problems such as, meeting time scheduling, remaindering, minute distribution and email sending.

The main advantages of developing a web based system is can accessed via the internet browser of whatever the device that looking from and no need to installed or download. The paper is incorporated with several sections. Section II is the literature survey and section III provide a brief overview of research methodology and experimental design. Finally, the paper concluded by indicating future works and new areas to be focused on the meeting management system along with the references.

## II.LITERATURE REVIEW

Meetings are conducted by every organization to reach and fulfil their organizational goals. In order to reduce the burden on the people, the meeting organization has developed systems for an improved and efficient way to simplify the method of manual assembly.

Many organizations schedule meetings so that they have to incur unnecessary expenses like papers for print minutes etc. So paperless meeting management system for Kotelwala Defence University that facilitates to get the meeting details, minute distribution, email sending to inform meeting schedules and direction map for the meeting venue has been designed. The main purpose of this system is to distribute meeting minute in a proper way and get the detail report. Additionally, it allows to get the information about history of the previous meetings as well as upcoming meetings. However, participants will not get any reminder before the meeting. (Perera and Vidanagama, 2020)

Often, each participant of the meeting has an uncertain and imperfect knowledge of preferences and the calendar of the other attendee. (Görz and Hölldobler, 1996) investigate how the calendar and preferential privacy affect process efficiency and meeting integration quality under the several different experiments. Using Allegro CLOS they implemented a system of truly automated software agents that operate as an independent process. They consider meeting schedule distribution to be a distributed task because each agent has access to their own user preferences and calendars to work on behalf of their user.

There are two types of paradigms of meeting scheduling scenarios called open scheduling system and close scheduling system. (Rosenschein, 1994) introduced three mechanisms called calendar oriented scheduling, meeting oriented approach and schedule oriented scheduling for scheduling a meeting in closed system.

(Lee, Jiang and Hsieh, 2006) presented a GFA (Genetic Fuzzy Agent) that uses the ontology model for the meeting scheduling system. The GFA will estimate the appropriate meeting deadlines based on the ontology model.

Research topic on “Time management representations and automation for allocating time to projects and meetings within an online calendaring system” illustrates a number services including automated project focus meetings with system owners, reminders and tracking of time and resources used for tasks, rescheduling of user input on task postponements and manipulating and rescheduling appointments. (United States Patent, 2000)

There are significant methods and approaches to simplify the manual meeting scheduling process. (Maheswaran et al., 2004) introduce the Distributed Multi-Event Scheduling (DiMES) framework and design congruent DCOP formulations that facilitates agents to optimize the time of scheduling multiple meetings.

The operations of some meeting management systems are basically based on efficient algorithms. Mostly the algorithms are used to schedule meetings.

(Athaya et al., 2019) proposed an algorithm and architecture for automated meeting scheduling and document management. In this research two algorithms were used to detect the conflict of time with attendees and other for to schedule the meeting automatically with necessary information. These algorithms are called conflict detection algorithm and automation algorithm respectively. The proposed solution is implemented by interviewing

higher management of the organization. Finally, this proposed system gives a most preferable time for all attendees by checking their schedule.

(Berger et al., 2009) introduced a scheduling system to determine suitable time and location for a group of participants who would like to schedule a new meeting, subject to already scheduled meetings that may take place in a number of different locations. For this, they proposed  $O(n \log n)$  algorithm with the concept of LP-type problems as the approach. A web based meeting scheduler developed to schedule meetings in office environment effectively. It supports to organizations to schedule meetings, monitor meetings, inform participants of meeting changes, cancel meetings, conducting virtual meetings, minimize users effort in coordinating and scheduling meetings. However, there is no way of generating minutes and distributing minutes. (Grover, 2010).

When going through these literatures, there are many algorithms were used for meeting scheduling. As well as many applications were implemented to perform various functionalities while scheduling and conducting meetings. When comparing each one, there are differences that are different from each other.

## **METHODOLOGY**

This research examines on to give a convenient time for all participants, sending notifications properly and to inquire before the meeting begins as the objectives. This research paper is being conducted under a “cross-sectional study” of the population at which meetings are being held, and is being used simultaneously to examine the existing characteristics of a population and to provide information on what is happening in the current population.

### **Data collection**

In order to gather requirements, there are two requirement elicitation methods were conducted to identify the functional and non-functional requirements. As the medium for collecting requirements from public, questionnaire is used. Questionnaire consisting of 10 questions which include 2 Likert-type questions, 5 dichotomous questions and 3 open-ended questions. Questionnaire was presented to the sample of 82 respondents to obtain their responses. People who are engaged in various professions like engineers, teachers, software developers, businessmen, students are selected as sample. Interviews are also followed since it is the formal approach of collecting data for software approaches. So, interviews were carried out with the participation of 20 employees of ministry of industries.

### **Data analysis**

The data which was gathered during the data collection process was analyzed at this stage. The outcomes of the data collection were subjected to data analysis process for the purpose of identifying user requirements, functional and the non-functional requirements. The outcome is analyzed as quantitative analysis.

## Data analysis framework

The survey was more focused on in-depth analysis of the factors influencing meeting scheduling. The main factors called required personnel, electronic devices, pre-warning and venue were further divided into sub factors.

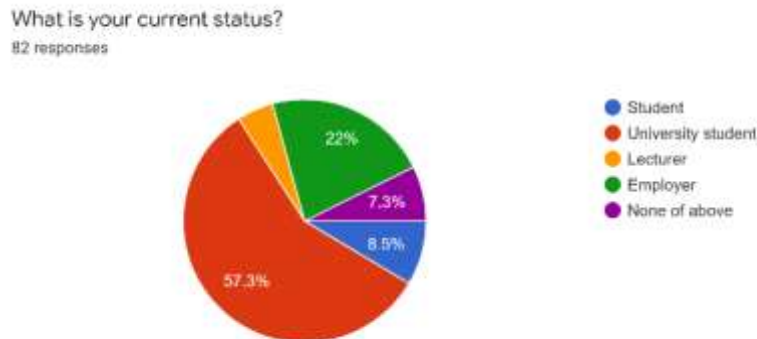
- Required personnel – This includes number of participants for the meeting.
- Electronic devices – This includes software that use to schedule meetings and sending notification such as email, SMS etc.
- Pre-warning – This includes methods use to inform the meeting before starting such as through call, SMS, other attendee etc.
- Venue – This includes methods use to find location and resources available in selected place.

## RESULTS AND DISCUSSION

Meeting take place in different environments. So there are different types of meetings. This study focus on find solutions when arising while scheduling meeting such as, meeting time scheduling, reminderings, minute distribution and email sending. Therefore for this, the results are shown below through the identified main factors.

A meeting is a discussion of two or more people working together to accomplish a task. Meetings are a regular feature of any workplace. They can range from small groups to inter-departments. No matter the size, scheduling a meeting is quite a bit difficult task. So, following chart shows the status of selected sample.

**FIGURE 1:** Current status



Analysis and interpretation: As shown in chart, a high percentage of 57.3% of the selected sample are university students and the small percentage are lecturers.

Specially, meetings are an important part of many organizations. So, they hold meetings almost every day. In addition, there are meetings held in weekly and monthly. Then need to schedule it in an effective way. Following chart shows the how often the selected sample have meetings.

**FIGURE 2:** How often do you have meetings



Analysis and interpretation: As shown in the figure above, it appears that more than half of the selected sample have meetings on daily. Mostly organizations held meetings daily to discuss about their goals and objectives, problems and questions as well as to exchange information with each other.

Once a meeting is scheduled, related parties must be notified prior to the meeting. This notification can be done in different ways. So, following figure shows how responders respond about the common ways of getting notifications.

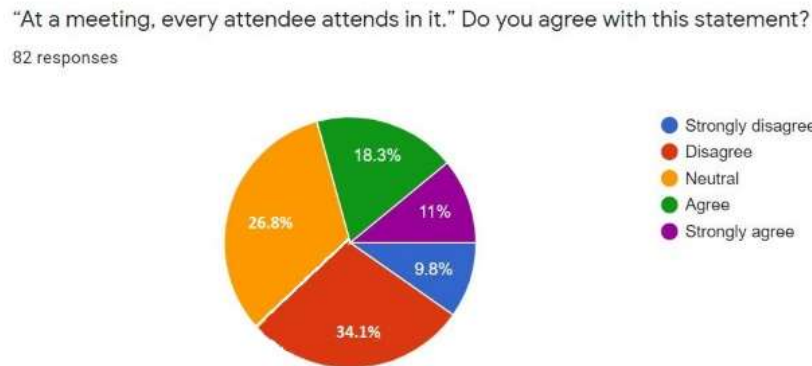
**FIGURE 3:** How you know a meeting is scheduled



Analysis and interpretation: It seems that 58.5% of the total sample is informed about the meeting through an email. Least amount of responders getting meeting notification through a memo.

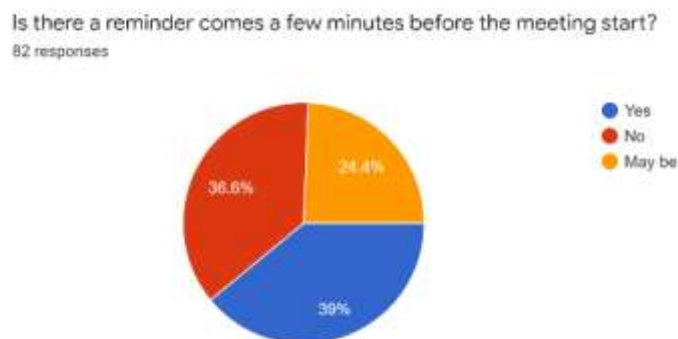
When scheduling a meeting, the participants are important. So, scheduler should consider the best time for all the participants. Following chart illustrates participation of attendees.

**FIGURE 4: Attendance of meeting**



Analysis and interpretation: In this figure 4, 34.1% of responders were disagreed with the statement that everyone who is invited will participate to the meeting. According to the result, it is clear that all the participants are not attend to the meeting. There may be several reasons that affect for this. The main reason could be the, when scheduler is scheduling a meeting, he does not consider a convenient time for all or most of the participants. Another reason contributing to this could be the inability to give advance notice of the meeting through the modes shown in figure 3. Especially when the email is not received properly. Following chart shows about the notification by reminder.

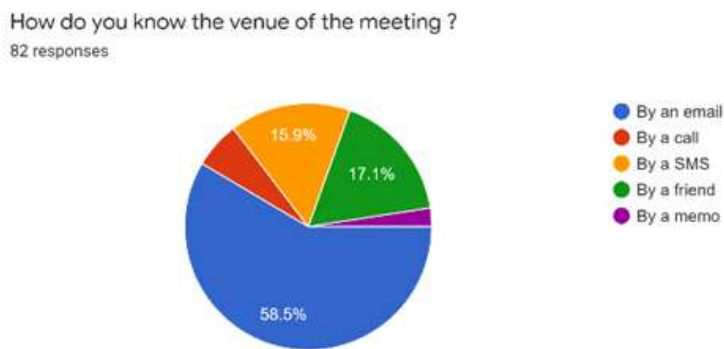
**FIGURE 5: Meeting reminder**



Analysis and interpretation: According to the figure 5, 39% have stated that they didn't get any reminder few minutes before starting the meeting. The main reason for this be the being overly busy in day today life makes man forget even the smallest thing. When the meeting is an announced about a day in advance, attendees forgotten the meeting schedule. Therefore decreased participation greatly affect the effectiveness of the meeting.

Participants need to be notified of where the meeting is to be held. The sample selected for this research stated how to know the meeting venue as follows.

**FIGURE 6**

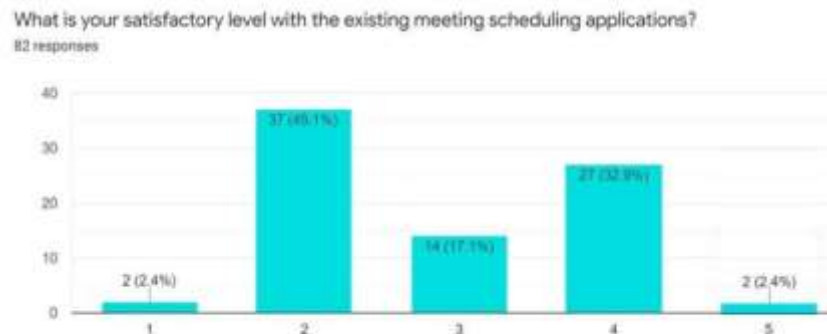


Analysis and interpretation: Above chart shows that 58.5% were know about the meeting venue from the agenda. Out of all other methods, agenda is the easiest way to know about the meeting in detail.

If a person is unable to attend the meeting due to various essential reasons, can find out what was discussed there in various ways. Following figure shows how the responders get know about what was discussed.

With the advancement of technology, a large number of meeting scheduling applications have been implemented. The opinion of the selected sample about those applications is as follows.

**FIGURE 7: Satisfactory level of existing systems**



Analysis and interpretation: The graph above shows that 37 out of 82 responders were not satisfied with the existing meeting scheduling applications. The reason for this could be the existing applications performs various different functionalities. In particular, they stated that there is no single application that performs all the basic functionalities such as sending emails, generating convenient time for all members, minute and agenda distribution and participant confirmation etc.

So, following table shows the features that prefer to add to new online meeting scheduling application as a percentage.

**TABLE 1.** Features add to the new system

| Functionality                                 | Percentage |
|-----------------------------------------------|------------|
| Sending emails to participants                | 23%        |
| Generating a convenient time for participants | 65%        |
| Agenda and minute distribution                | 38.4%      |
| Ability to see other participants             | 32.9%      |
| Participant confirmation                      | 21%        |
| Meeting time remaindering through SMS         | 53.5%      |

Analysis and interpretation: As shown in table 1, most of them like if the new system is consist of an auto time generating functionality for most of the participants can by going through the participants' schedule.

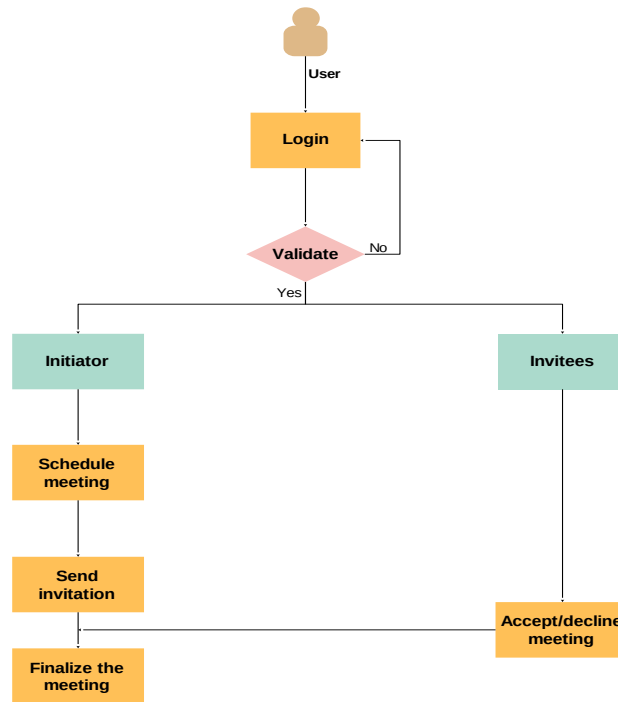
Above mentioned survey results shows that implementing such a web based meeting management system is necessary for the improvement of the current manual system. So, through the statistics of this survey could get an overall idea about what the people think about.

## RECOMENDATION

As a solution for identified problems, this study can introduce a successful and effective recommendation for online meeting scheduling application. Following flow chart shows the basic functionality for recommended web based system.



**FIGURE 8:** Flow chart of basic functionality



**Source:** Author

According to this chart, when the user is initiator, user schedules the meeting and send invitations to the participants. When user is an invitee, user can see all meeting invitations with agenda. By looking through this, user can accept or decline the meeting. After the responses of invitees initiator can finalize the meeting. Few minutes before the meeting start, user will get a SMS. After meeting is held, meeting minute will distribute by initiator to the participants.

Many users were expect a new system with automatic time generating feature. It happens in “schedule meeting” process indicate in figure 8.

## CONCLUSION

With the advancement of telecommunication industry, holding meetings have become more common and convenient. A meeting is a gathering of two or more people in a formal or business setting and it can occur in different environments. The success of a meeting depends on its schedule. Accordingly, successfully scheduling a meeting is a very important task. With the rapid development of technology, applications with different functionalities have been created to ease it to some extent. However, the main problems with the results and outcomes are the failure to inform and remind the participants about the meeting, the lack of selecting a suitable time for most participants can, inability to deliver the agenda and minute on time and waste of time and papers stood out. So, the main signif-

ificance of the newest system will be that this provides solutions to inefficient process of selecting a convenient time. Although applications have been created as a solution to many of these problems, it is clear from the literature review that no application has yet been created to freeze them all. Therefore, a web based application that has all these functionalities is very valuable for anyone who holds meetings.

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# TECHNICAL EFFICIENCY OF THAI SAVINGS AND CREDITS COOPERATIVES AND ENVIRONMENTAL FACTORS

by

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## ABSTRACT

This study analyzed the technical efficiency and environmental factors affecting Thai savings and credits cooperatives using a multiple-stage DEA-SFA. The slacks-based measure of efficiency model was selected to analyze savings and credits cooperatives in Bangkok and surrounding areas. All financial data were collected from the databases of the Cooperative Auditing Department. On average, the cooperatives' efficiency scores in the initial stage for production and intermediation models were at a moderate level. The police cooperatives were founded to have the highest efficiency. The results from the second-stage Tobit regression and the third-stage SFA confirm that the external factors did affect the cooperatives' operations. When the effects of the environmental factors were removed, the academic institution cooperatives have the highest average score. The cooperative managers could benefit from this study by reducing the identified slacks. Also, the specific policies, promotions, and regulations for each group of cooperatives should be considered by the regulators.

**KEY WORDS:** Savings and credits cooperative, Efficiency, Data Envelopment Analysis, Slack-based, Environmental factors

## INTRODUCTION

In 1916, the Wat Chan Cooperative Unlimited Liability, the first Thai cooperative, was established by the government in a small village of Phitsanulok province to help indebted farmers. The cooperatives' mission was to enhance their members' bargaining powers on supply sourcing and product selling. Until recent years, seven types of Thai cooperatives have been gradually developed and grown. In 2019, there were 6,563 cooperatives with around 11.4 million members, or equivalent to 17% of the Thai population approximately. When considering all cooperatives' business transactions, the savings and credits cooperatives (SCCOs) had a maximum proportion at 81% of total transactions. The SCCOs were categorized as a type of microfinance institution (MFI) that has been lately intensified and has become significant in Thailand (Asawarangpipop & Suwunnamek, 2014). As for the year 2019, the total business value is 1.76 trillion Baht increasing 3.08% from the year 2018. The most business value is generated by credit businesses with a total income of 155,727.45 million Baht. The SCCOs were set up by a group of people to lend their helping hands to one another to solve financial problems and lift their living standards by enhancing members to know how to save money and giving them loans for spending in needy situations. Due to various occupational groups that were formed as savings and credits cooperatives, the number of members and operating capital varies accordingly. Some savings and credits cooperatives manage their capital with share capital and deposits whereas some who have not enough capital must ask for a loan to facilitate their members as a whole. The examples of sub-occupational groups are as follows; Academic institutions, Governmental organizations, Hospital and health care, Military, Police, State-owned enterprises, and Private organizations.

A study of savings and credits cooperatives' efficiency is significant. In literature, knowledge of microfinance institutions' performances, such as cooperatives, have been lack far behind other financial institutions. In addition, due to specific characteristics of the SCCOs that differ from other financial institutions, the standard assessment of conventional financial institutions might not be appropriate to evaluate savings and credits cooperatives' efficiencies. Therefore, the savings and credits cooperatives' specific efficiency evaluations with the appropriate measurement became important. Also, the influences of the environment on technical efficiency cooperative efficiency are still questionable.

This study assesses the technical efficiency of savings and credits cooperatives in 2018. Mainly, we investigate (i) the relative efficiency of cooperatives in metropolitan areas; and (ii) the environmental factors that affect cooperative efficiency. The slacks-based measure (SBM) of efficiency (Tone, 2001), which is overlooked by previous cooperative efficiency studies, is applied to estimated cooperatives' technical efficiency. The focus on cooperative-environmental factors used in this study includes the number of cooperative members, asset size, and cooperative members' occupations.

## LITERATURE REVIEW

Two conventional data envelopment analysis (DEA) models were mostly used in the financial institution efficiency studies. The CCR model by Charnes, Cooper, and Rhodes (1978) evaluates technical efficiency (TE), while the BCC model by Banker, Charnes, and Cooper (1984) separates the technical efficiency into pure technical efficiency (PTE) and scale efficiency (SE) in an imperfect world of competition. The DEA uses the observed inputs and outputs information to generate an efficient frontier, without using parameters or relying on any estimation of production functions. It assumes no random errors, and therefore, the similarity of the sample is required. The DEA models mentioned earlier estimate technical efficiency that accounts only for the radial input and output values but ignores non-radial input excesses or output shortfalls. Therefore, a decision-making unit (DMU) may be rated as fully efficient even though it has input excesses or output shortages. Also, non-negative inputs and outputs are required in the typical models; hence, they may not be suitable for measuring operators that generate adverse outcomes, such as loss from operations. Tone (2001) applied a slacks-based measure (SBM), which includes radial and non-radial slacks in the efficiency estimation, to address this issue.

### **Accounting for external factors**

The DEA calculation is based on the primary assumption of sample homogeneity. There has been an ongoing argument that the operating environment can substantially impact the sample's similarity; hence, the estimated efficiency could be confounded by environmental influence. In the literature, single-stage and multiple-stage approaches have been used to account for external factors in the DEA studies. In a single-stage study (see Banker & Morey, 1986a; Banker & Morey, 1986b), the environmental variable can be plugged directly as a constraint in a linear programming model. However, the model's discriminatory power is weakened when an environmental factor is included in the model. It reduces the reference set of best-practice, resulting in an increasing number of efficient DMUs. Also, the anticipated direction of the influence is needed, and only one environmental variable can be included at a time (Coelli, Rao, & Battese, 1998).

The two-stage method starts by running DEA with standard inputs and outputs. Then, the DEA scores and the set of environmental factors are regressed. This procedure's advantages are that many environmental variables can be evaluated simultaneously without distorting the model's discrimination power (Pastor, 2002). There is no need to predict the direction of the environmental variable's influence in advance. Researchers can also test the hypothesis that the variables significantly influence efficiencies (Coelli et al., 1998). Since the DEA scores are truncated between zero and one by nature of the linear program, many studies suggest that the Tobit regression is more appropriate than other regression forms (Coelli, Rao, O'Donnell, & Battese, 2005; Hoff, 2007; McCarty & Yaisawarng, 1993). Despite the advantages, a significant drawback of the two-stage Tobit-DEA is that it ignores to separate measurement error from managerial inefficiency.

Multiple-stage DEA has been used in various ways. The standard procedures start with the BCC model. A Tobit regression was then used to explain the external environment that

impacts performance estimated in the first stage. Finally, the adjusted data were repeated in the first-stage DEA model to compare the result (Fried, Schmidt, & Yaisawarng, 1999). Drake, Hall, and Simper (2006) replaced the first stage BCC with the SBM to included radial and non-radial slacks in the estimation. However, using Tobit regressions in the second stage could not separate statistical noise in the data. Fried, Lovell, Schmidt, and Yaisawarng (2002) repeat the first stage's BCC model. Instead of the Tobit regression, a stochastic frontier analysis (SFA) was then applied to regress the radial slacks on environmental variables and separate noise and inefficiency. Finally, after adjusting external factors and noise to the original data, the step-one DEA model was repeated. Thus, the final scores from this stage reflect "pure" operating efficiency.

However, the non-radial slacks of DMUs were ignored by Fried et al. (2002) model. Avkiran and Rowlands (2008) note that a fully units-invariant model is needed in interpreting DEA and SFA estimates in multiple-stage DEA. They then propose a multiple-stage non-oriented SBM and SFA, which is fully units-invariant. Later on, Thoraneenitiyan and Avkiran (2009) highlight how the analysis can benefit from the combined use of non-parametric and parametric techniques. Table 1 shows a summary of seminal works that accounting for external factors in DEA.

**TABLE 1.** Summary of referred works that accounting for external factors in DEA.

|                                    | Two-stage | Three-stage |     |                            |
|------------------------------------|-----------|-------------|-----|----------------------------|
|                                    |           | BCC         | SBM | Input / Output Orientation |
| McCarty and Yaisawarng (1993)      | ✓         |             |     | Tobit                      |
| Coelli et al. (1998)               | ✓         |             |     | Tobit                      |
| Coelli et al. (2005)               | ✓         |             |     | Tobit                      |
| Hoff (2007)                        | ✓         |             |     | Tobit                      |
| Fried et al. (1999)                |           | ✓           |     | Input                      |
| Fried et al. (2002)                |           | ✓           |     | Input                      |
| Drake et al. (2006)                |           |             | ✓   | Input                      |
| Avkiran and Rowlands (2008)        |           |             | ✓   | Non-oriented               |
| Thoraneenitiyan and Avkiran (2009) |           |             | ✓   | Non-oriented               |

### Cooperative technical efficiency

Studies on the efficiencies of savings and credits cooperatives have been limited. Most of them applied traditional CCR and BCC models to evaluate cooperatives' technical efficiency. For example, Cheamuangphan (2011) used the BCC model to assess many types of saving groups, included production savings groups, credit unions, and community banks in eight upper northern provinces of Thailand. Sunkseeraj and Supahvitidpattana (2014) evaluate 14 agricultural cooperatives' technical efficiency in Sakon Nakhon province for the year 2013.

Few studies examined the relationship of exogenous factors that may affect financial cooperatives' performance, and most of them were under the intermediation assumption. Asawaruangpipop and Suwunnamek (2014) investigated the efficiency of Thai savings and credits cooperatives and indicated that state-owned enterprise cooperatives had the highest efficiency units and average efficiency scores. Ieamvijarn (2018) used the BCC model and an ordered probit model to examine factors that affect microfinance efficiency in Mahasarakham province. The result showed that welfare and benefit allocation were the main factors that positively affected the MFIs' efficiency. Chabkun

and Nilbai (2019) analyze the efficiency of public sector cooperatives using the output-oriented BCC Model. Findings showed that the technical efficiency of Thai public sector cooperatives was high. Most of these were large cooperatives. However, it was decreasing over time. The study found that the teacher and police cooperatives had the highest ratio than cooperatives of other professions.

The efficiency studies mentioned earlier evaluated only technical efficiency using CCR and BCC models that account for the radial slacks but neglect non-radial inefficiencies. As a result, a DMU with input excesses or output shortage may be classified as a fully efficient unit following the BCC model. Although the recent studies identify the relationship between factors that may affect cooperative technical efficiency, none of them attempted to remove these effects from cooperative managements' performance. As a result, a management committee may be praised for their superior performance because of the higher playing field level. On the other hand, a cooperative with a suffered environment may be judged as inefficient without fair judgment for their efforts. This research then proposed a comprehensive four-stage procedure to assess technical efficiency based on the same level of the field for all cooperatives described in the next section.

## **METHODOLOGY**

### **Data collection**

According to the Cooperative Promotion Department's record, in 2018, there were 1,394 SCCOs operated in Thailand, and 522 cooperatives were located in Bangkok and the surrounding area. The total assets of these were about 55 percent of the total SCCOs assets. After removing the cooperatives with incomplete and incomparable data, the input and output data of 302 SCCOs in Bangkok and the surrounding area, i.e., Bangkok, Nonthaburi, Pathumthani, and Samutprakarn in 2018, were collected from the Cooperative Auditing Department database. The sample was categorized into seven groups, namely, academic institutions, government, public health and hospital, military, police, state-owned enterprises, and private groups of cooperatives.

### **Efficiency models**

Two primary concepts on bank behavior have been used in the financial institutions' literature. First, the intermediation concept regards a financial institution as a fund mover from depositors to business (Sealey & Lindley, 1977). As a result, deposits, labor capital, and physical assets are counted as inputs to generate loans and provide profit. Second, the production concept views a financial institution's role as a provider of account holders' services. Then labor and capital inputs are used by a financial institution to generate deposits and loan products.

In Thai literature, most cooperative efficiency studies applied the intermediation concept to evaluate cooperatives' performance. A few had been conducted using the production concept, although it may suit the main objectives of the SCCOs that are to promote savings and provide a source of funds for their members. This research used the combination of inputs and outputs based on both concepts in Model 1 and Model 2. It will benefit researchers if the two methods provide comparable results.



**TABLE 2.** Inputs and outputs in technical efficiency models

| Model 1 Production Concept           |                              | Model 2 Intermediation Concept   |                              |
|--------------------------------------|------------------------------|----------------------------------|------------------------------|
| <b>Inputs</b>                        | Outputs                      | Inputs                           | Outputs                      |
| (X <sub>1</sub> ) Total Assets       | (Y <sub>1</sub> ) Deposits   | (X <sub>1</sub> ) Deposits       | (Y <sub>1</sub> ) Loans      |
| (X <sub>2</sub> ) Member Capital     | (Y <sub>2</sub> ) Loans      | (X <sub>2</sub> ) External Debt  | (Y <sub>2</sub> ) Net Income |
| (X <sub>3</sub> ) Operating Expenses | (Y <sub>3</sub> ) Net Income | (X <sub>3</sub> ) Member Capital |                              |

In the production model, following the main objective of a savings and credits cooperative, total assets, member capital, and operating expenses are inputs used by a DMU to promote member deposits and provide loans as needed. Also, net income is regarded as the final output to keep the SCCO growing. On the other hand, under the intermediation assumption, deposits, external debt, and member capital are regarded as input funds converting to loans and generate profit for the SCCO.

#### Four-stage DEA/SFA analysis to measure real managerial efficiency

The first stage starts with the observed inputs and outputs in the output-oriented SBM model. The linear programming to calculate the relative efficiency is shown in Equation 1:

$$\frac{1}{\rho_o^*} = \max_{\lambda, S^-, S^+} 1 + \frac{1}{S} \sum_{r=1}^S \frac{S_r^+}{y_{ro}}, \quad (1)$$

subject to

$$\begin{aligned} x_{io} &= \sum_{j=1}^n x_{ij} \lambda_j + S_i^- \quad (i=1, \dots, m), \\ y_{ro} &= \sum_{j=1}^n y_{rj} \lambda_j - S_r^+ \quad (r=1, \dots, s), \\ S_i^- &\geq 0 \quad (\forall i), \quad S_r^+ \geq 0 \quad (\forall r), \quad \lambda_j \geq 0 \quad (\forall j). \end{aligned}$$

where  $\rho^*$  is the efficiency proportion calculated from radial and non-radial inefficiencies,  $x_{io}$  is a DMU's set of inputs,  $y_{ro}$  is a DMU's set of outputs,  $S_i^-$  and  $S_r^+$  represent input excesses and output shortfall or slacks, and  $x_{ij} \lambda_j$  and  $y_{rj} \lambda_j$  denote benchmark the input usage and the output produced. The subscript 'o' indicates the unit evaluated, and the linear program is solved once for each DMU in the sample. A DMU is classified as an efficient unit if the objective function's optimal value equals unity and has zero output slacks.

In stage 2, two sets of environmental factors for size, and occupational groups of cooperatives were imposed to the Tobit regression in Equation 2:

$$TE_i = \delta_0 + \delta_1 Z_{1i} + \delta_2 Z_{2i} + \delta_3 Z_{3i} \dots \dots + \delta_g Z_{gi} + \varepsilon_i \quad (2)$$

where  $Z_{1i}$ ,  $Z_{2i}$ , ...,  $Z_{gi}$  are independent variables 1 to g, which include two variables for size and six dummy variables for the occupational group,  $\delta_0$ ,  $\delta_1, \dots, \delta_g$ , are estimated coefficients, and  $\varepsilon_i$  is a random error under the assumption  $\varepsilon_i \sim N(0, \sigma^2)$ .

The occupational groups are defined as environmental factors for two main reasons. First, since a savings and credits cooperative is formed by a group of members those work in the same organization or workplaces, the average revenue and standard of living among the members may be the same. However, people who work in different occupations, e.g., doctors, teachers, soldiers, may have different salaries, living expenses, and saving behavior. Therefore, it may force the SCCOs managers to manage differently according to the characteristics of their members. Second, in the previous studies (Thoraneenitiyan, 2020; Sreethon & Thoraneenitiyan, 2021), it was found that the SCCOs from some types of occupations had the highest number of efficient units across time. Hence it might be suspicious that the outstanding performance may partly due to the favorable environment of that occupation.

After identifying the environmental factors that might affect the cooperative's managerial efficiency, stage 3 proposes decomposing output slacks calculated from the first stage into external effects, random error, and managerial inefficiency. The SFA was used to separately regress environmental variables, which were statistically significant from the Tobit regression in stage 2. The SFA regression to identify sources of output slacks (Avkiran & Rowlands, 2008) are presented in Equation 3:

$$S_{r,j}^+ = f^r(Z_j; \beta^r) + v_{r,j} + u_{r,j} \quad (3)$$

where  $S_{r,j}^+$  are the first stage slacks in the  $r^{\text{th}}$  output for the  $j^{\text{th}}$  unit. The term  $Z_j$  is a set of environmental variables,  $\beta^r$  is a set of coefficients to be estimated, and  $(v_{r,j} + u_{r,j})$  is a composite error term, where  $v_{r,j} \sim N(0, \sigma_v^2)$  is statistical noise, and  $u_{r,j} \geq 0$  is managerial inefficiency calculated under a truncated-normal of the one-sided error term (Battese & Coelli, 1992). The signs of the parameters estimated,  $\beta^r$ , can be used to identify the direction of environmental impact.

This study applied the Jondrow et al. (1982) method to separate statistical noise from managerial inefficiency in the composite error term. The parameter  $\gamma = \sigma_u^2 / (\sigma_u^2 + \sigma_v^2)$  is estimated to measures the proportion of managerial inefficiency variation to the total slacks variation. When  $\gamma$  is close to unity, the influence of management is dominant to variation in slacks. On the other hand, if  $\gamma$  is nearly zero, the statistical noise plays a significant role in the inefficiency, and the slacks need to be adjusted. Following these procedures, statistical noise attached to output productions is estimated by changing from the stage 1 output slacks.

After obtaining the coefficients from SFA regressions, observed outputs are adjusted for the environment and statistical noise impacts. The SCCOs outputs will be adjusted upward if they operate in unfavorable environments and suffer from statistical noise, as shown in Equation 4, obtained from Avkiran and Rowlands (2008):

$$y_{r,j}^A = y_{r,j} + [Z_j \hat{\beta}_r - \min_j \{Z_j \hat{\beta}_r\}] + [\hat{v}_{r,j} - \min\{\hat{v}_{r,j}\}] \quad (4)$$

where  $y_{r,j}^A$  is the adjusted  $r^{\text{th}}$  output in the  $j^{\text{th}}$  unit,  $y_{r,j}$  is the observed output,  $Z_j \hat{\beta}_r$  is a set of the output slack attributable to environmental factors, and  $\hat{v}_{r,j}$  is the output slack from statistical noise.

Stage 4 is a repetition of the first stage SBM using original input and adjusted output data obtained from stage 3. The results from stage 4 represent managerial efficiency without influencing the environment and statistical noise.

## RESULTS AND DISCUSSION

The results of technical efficiency estimates under the production model (Model 1) in Bangkok and the surrounding area in 2018 was found that 46 SCCOs were classified as fully efficient, and the cooperatives in government offices had the highest proportion of fully efficient units (20.54%). On average, the efficiency of SCCOs lies in the mid-range level of 0.6583, while the lowest score was 0.0536. This result was similar to that shown in Thoraneenitiyan (2020). However, the prior study only focused on the very large SCCOs and did not investigate the impact of the operating environment.

Efficiency scores under the intermediation model (Model 2) were indicated in the right columns of Table 3. The 46 SCCOs were categorized as efficient units. The police cooperatives had the highest percentage of the efficient unit (41.17%). The average efficiency scores of 302 SCCOs lie in the mid-high level of 0.7278, while the lowest score was 0.0527. It also found that the police SCCOs had the highest average efficiency scores, whereas the SCCOs from the private sector got the lowest. These results robust across the two models. When considering the distribution of the efficiency score estimates for both models, less than one-third (15.23%) of the SCCOs were evaluated as fully efficient. According to Avkiran (2006), it implies that the discriminant power of the model is suitable for separating the inefficient and efficient SCCOs.

**TABLE 3.** Comparison of efficiency score estimated by production and intermediation models

| Type of SCCOs            | No. of DMU | Production Model (Model 1) |                        | Intermediation Model (Model 2) |                        |
|--------------------------|------------|----------------------------|------------------------|--------------------------------|------------------------|
|                          |            | Mean                       | No. of Efficient DMU   | Mean                           | No. of Efficient DMU   |
| Academic Institution     | 25         | 0.6331<br>(0.2564)         | 3<br>(12.00%)          | 0.6846<br>(0.2376)             | 4<br>(16.00%)          |
| Government               | 73         | 0.7470<br>(0.1922)         | 15<br>(20.55%)         | 0.7525<br>(0.1735)             | 9<br>(12.33%)          |
| Hospital and Health Care | 17         | 0.7330<br>(0.1830)         | 1<br>(5.88%)           | 0.6938<br>(0.2302)             | 2<br>(11.76%)          |
| Military                 | 37         | 0.7360<br>(0.2038)         | 6<br>(16.22%)          | 0.8084<br>(0.1214)             | 4<br>(10.81%)          |
| Police                   | 17         | 0.7810<br>(0.1564)         | 3<br>(17.65%)          | 0.9244<br>(0.0957)             | 7<br>(41.18%)          |
| State-owned Enterprise   | 41         | 0.7094<br>(0.2523)         | 8<br>(19.51%)          | 0.7728<br>(0.1949)             | 8<br>(19.51%)          |
| Private sector           | 92         | 0.5042<br>(0.2526)         | 10<br>(10.87%)         | 0.6374<br>(0.2430)             | 12<br>(13.04%)         |
| <b>Total</b>             | <b>302</b> | <b>0.6583<br/>(0.2477)</b> | <b>46<br/>(15.23%)</b> | <b>0.7278<br/>(0.2140)</b>     | <b>46<br/>(15.23%)</b> |

*Note:* Standard deviation and percentage of efficient DMU are in parentheses, respectively.

Source: Author's calculation

Table 4 shows that although the number of efficient units from both models are the same, the average of the efficiency estimates from both models are statistically significant and reject the hypothesis that the means of the two models are the same. This result raises awareness to the researchers that may have to choose a suitable for their specific objectives. While the production model assumes that the SCCOs should promote saving and provide a loan as needed, the intermediation model suggests that the SCCOs should make a profit by minimizing deposit or interest expenses as a significant input and increase loans or interest income to increase an output quantity, as it was in the commercial banks.

**TABLE 4.** Test for equality of means between Model 1 and Model 2

| Method                      | df          | Value     | Probability |
|-----------------------------|-------------|-----------|-------------|
| t-test                      | 602         | -3.689679 | 0.0002      |
| Satterthwaite-Welch t-test* | 589.5876    | -3.689679 | 0.0002      |
| ANOVA F-test                | (1, 602)    | 13.61373  | 0.0002      |
| Welch F-test*               | (1,589.588) | 13.61373  | 0.0002      |

Source: Author's calculation

During this study, the savings and credits cooperatives in the metropolitan area encountered flooded deposits and a shortage of loans to members. Therefore, the intermediation approach (Model 2), where the deposit is regarded as an input, was proceeded in the next steps to explore the possible environmental effect on efficiency and shortage of loans and profit of the SCCOs.

Environmental factor analysis results from the Tobit regression in Table 5 found that the number of cooperative members (MEM) and total asset (ASSET) did not impact the technical efficiency estimated significantly. However, all dummy variables for occupations are associated with efficiency at a high statistical significance level. Therefore, in the next stage, only six dummy variables for occupations are included in the stage 3 SFA.

In stage 3, the slacks from the stage 1 SBM were adjusted using SFA, as shown in Table 6. From the figures in the table, the type of occupations did impact the cooperative loans. It is noted that the SCCOs in government units may have more loan slacks than the private SCCOs. On the other hand, the SCCOs in the hospital or public health care may have less loan slack than the private ones. Also, the type of occupations did impact the cooperative profit shortage differently. From the coefficient estimated, the SCCOs in academic institutions, government offices, and state-owned enterprises may have more profit slacks than the private SCCOs. On the other hand, the SCCOs in the hospital or public health care, military, and police units may have fewer profit slacks than the private cooperatives. The gamma values ( $\gamma$ ) in both equations were close to one; therefore, random error adjustments were not required.

**TABLE 5.** Coefficients estimated from the Tobit regression

| Variable                | Coefficient | Std.Error                        | z-Statistic | Probability |
|-------------------------|-------------|----------------------------------|-------------|-------------|
| C                       | 0.682805    | 0.151623                         | 4.503317    | 0.00000**   |
| MEM                     | -0.007301   | 0.008188                         | -0.891700   | 0.37260     |
| ASSET                   | 0.000919    | 0.007352                         | 0.124967    | 0.90050     |
| ACA                     | 0.151190    | 0.053616                         | 3.454749    | 0.00000**   |
| GOV                     | 0.114809    | 0.036021                         | 3.187250    | 0.00140**   |
| HOS                     | 0.165492    | 0.056869                         | 3.151630    | 0.00150**   |
| MIL                     | 0.163863    | 0.037960                         | 4.316740    | 0.00000**   |
| POL                     | 0.279626    | 0.049285                         | 5.673644    | 0.00000**   |
| STO                     | 0.140782    | 0.041605                         | 3.383783    | 0.00070**   |
| Mean dependent variance | 0.727778    | S.D. dependent variance 0.214006 |             |             |
| S.E. of regression      | 0.202067    | Akaike info criterion-0.331089   |             |             |
| Sum squared residua     | 111.96346   | Schwarz criterion-0.220514       |             |             |
| Log likelihood          | 58.99446    | Hannan-Quinn criterion-0.286846  |             |             |
| Avg. log-likelihood     | 0.195346    |                                  |             |             |

Note: \*\*, \* indicate significance level at 1% and 5% respectively

Source: Author's calculation

**TABLE 6.** Coefficients estimated from SFA

| Independent variables   | Dependent variable: Slack variables |              |
|-------------------------|-------------------------------------|--------------|
|                         | Loan slack                          | Profit slack |
| Constant                | 22.4920                             | 18.8683*     |
| Academic                | 0.3510                              | 0.4801**     |
| Government              | 0.3422**                            | -0.2690**    |
| Hospital                | -0.2194**                           | -0.6988**    |
| Military                | -1.0306                             | -0.3164**    |
| Police                  | 0.0178                              | -1.6809**    |
| State-owned enterprise  | 0.9133                              | 0.1452**     |
| sigma-squared           | 136.2424**                          | 93.9313**    |
| gamma                   | 0.9999**                            | 0.9999**     |
| log likelihood function | -930.65                             | -868.43      |
| LR test one-sided error | 216.90**                            | 210.80**     |

Note: \*\*, \* indicate significance level at 1% and 5% respectively

Source: Author's calculation

After the effects of environmental factors on loans and profit were removed from the initial data, the results of the "purified" technical efficiency of SCCOs from stage 4 calculation shown in the right two columns of Table 7. It was found that the number of efficient units was 56, which increase by 10 DMUs compared to the first stage results. This result is aligned with Fried et al. (2002), Thoraneenitiyan and Avkiran (2009), and Liu (2018); However, the average technical effi-

ciency score of 0.671 is lower than that of in the first stage and statistically rejects the null hypothesis that the means of step 1 and step 4 were the same. Table 7 also illustrates the comparison of technical efficiency between stage 1 and stage 4, categorized by occupation type. The figures show that the police SCCOs with the highest average score in the first stage were down to the lowest level among the groups. On the other hand, the SCCO in academic institutions with the second-lowest score in the early stage was graded as the highest average efficiency scores after the environmental effects were removed.

**TABLE 7.** Comparison of technical efficiency between stage 1 and stage 4

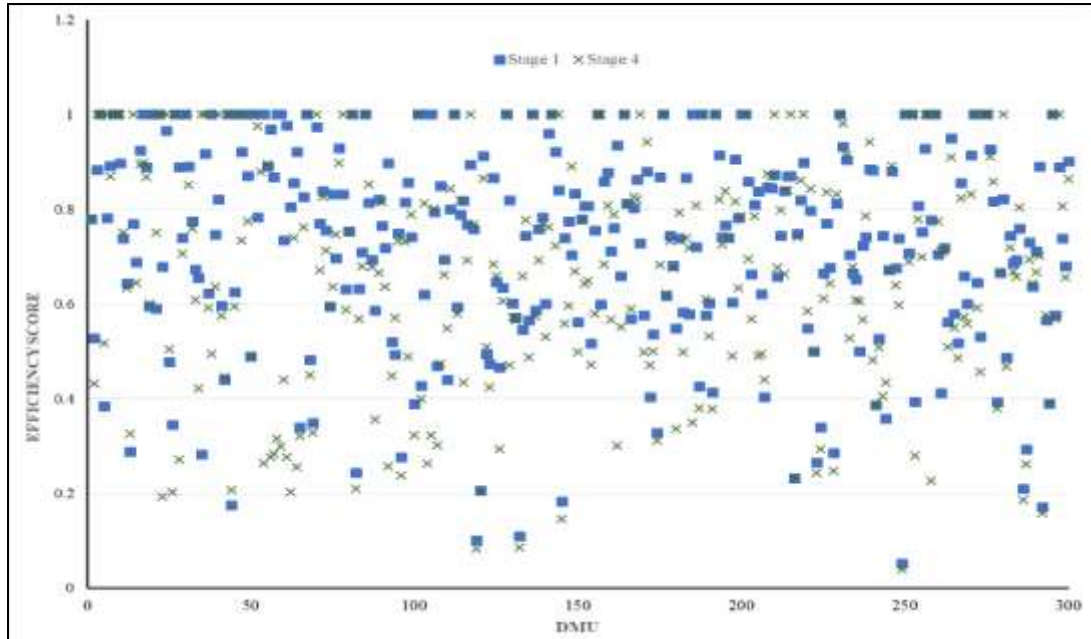
| Type of SCCOs            | No. of DMU | Stage 1                          |                              | Stage 4                            |                              |
|--------------------------|------------|----------------------------------|------------------------------|------------------------------------|------------------------------|
|                          |            | Mean                             | No. of Efficient DMU         | Mean                               | No. of Efficient DMU         |
| Academic Institution     | 25         | 0.6846<br>(0.2376)               | 4<br>(16.00%)                | 0.81348<br>(0.22128)               | 11<br>(44.00%)               |
| Government               | 73         | 0.7525<br>(0.1735)               | 9<br>(12.33%)                | 0.75836<br>(0.19574)               | 17<br>(23.29%)               |
| Hospital and Health Care | 17         | 0.6938<br>(0.2302)               | 2<br>(11.46%)                | 0.42578<br>(0.18099)               | 1<br>(5.88%)                 |
| Military                 | 37         | 0.8084<br>(0.1214)               | 4<br>(10.81%)                | 0.67330<br>(0.13821)               | 3<br>(8.11%)                 |
| Police                   | 17         | 0.9244<br>(0.0957)               | 7<br>(41.18%)                | 0.31536<br>(0.18093)               | 1<br>(5.88%)                 |
| State-owned Enterprise   | 41         | 0.7728<br>(0.1949)               | 8<br>(19.51%)                | 0.78333<br>(0.20789)               | 10<br>(24.39%)               |
| Private sector           | 92         | 0.6374<br>(0.2430)               | 12<br>(13.04%)               | 0.62301<br>(0.24821)               | 13<br>(14.13%)               |
| <b>Total</b>             | <b>302</b> | <b>0.7278</b><br><b>(0.2140)</b> | <b>46</b><br><b>(15.23%)</b> | <b>0.67100</b><br><b>(0.24434)</b> | <b>56</b><br><b>(18.54%)</b> |

*Note:* Standard deviation and percentage of efficient DMU are in parentheses, respectively.

*Source:* Author's calculation

Figure 1 illustrates the technical efficiency score estimated from stage 1 and stage 4. It was found that the ranks of SCCOs between the two stages were different. For example, the efficiency level of DMU 48, which had an efficiency score of 0.18 in stage 1, was adjusted upward to 0.21 after environmental effects removal. On the other hand, the efficiency level of DMU 148, which had an efficiency score of 0.20, was adjusted downward to 0.17. This implies that the cooperative that was enjoyed a favored environment and was evaluated as a high (low) efficient unit in stage 1 maybe because of its favorable (unfavorable) environments, rather than by management efforts only.

**FIGURE 1:** Comparison of technical efficiency between stage 1 and stage 4



## CONCLUSIONS AND RECOMMENDATIONS

This study uses financial data of 302 savings and credits cooperatives in Bangkok and the surrounding area in 2018 to estimate technical efficiency by removing environmental effects based on an integrated four-stage DEA and SFA approach. The slacks-based measure DEA was used to estimate the technical efficiency of SCCOs in the first and final steps.

The empirical results from this research contribute to cooperative efficiency studies in many ways. First, the benefits from using SBM as its ability can capture both radial and non-radial slacks, and superior to the former studies which applied the traditional models such as CCR and BCC. The average efficiency score estimates in this study are lower than those in literature, using traditional DEA models. Due to the inability to capture non-radial slacks of the traditional model, the fully efficient unit measured in previous studies might be overstated. Therefore, this study sheds light on the importance of slacks and introduces a more precise set of fully efficient cooperatives than those in Thai cooperative literature. The suggestions generated from the DEA-SFA model estimations could help the cooperative's managers to improve their efficiencies by removing inputs and output slacks precisely.

Second, the comparison of efficiencies estimated from production and intermediation was statistically different. In the prior efficiency studies of savings and credits cooperatives, they mostly applied the intermediation model, which views a cooperative as a financial institution acting as an agent to mobilize funds from depositors to borrowers and generate profit. However, the main objectives of SCCOs were different. The SCCOs were built to promote saving and provide the fund to members as needed. The comparison of production

and intermediation models for the efficiency estimation in this study highlights that although the number of efficient units was the same, the average efficiency scores, distribution, and rank order of the SCCOs were different. Therefore, the selection of an appropriate model is crucial to match the main objectives of the evaluation.

The findings suggest that cooperatives and policymakers enhance cooperative efficiency by leveling the common ground for all cooperatives. To the best of the author's knowledge, this paper appears to be the first study that applied an integrated four-stage DEA to isolated environmental factors from managerial efficiency in Thai cooperatives. The fourth-stage efficiency's results show differences from the first stage, after the cooperatives' original outputs being adjusted according to their operating environments. Then, the number of fully efficient cooperatives have increased. The evidence suggests the cooperative that was evaluated inefficient in the first stage might cause by the environment. The differences in occupation types, level of salary, cooperative members' standard of living, may push the cooperative to operate differently. Therefore, "one-for-all regulations" for all savings and credits cooperatives might be inappropriate. Instead, suitable policies, promotions, and regulations for each group of cooperatives should be considered.

Further study should add more time-series data to explore what extent of macro-economic environment that changes over time could affect the cooperatives' efficiency. As a type of financial institution, savings and credits cooperatives cannot ignore the impact of economic shocks such as pandemics and economic recession. Total factor productivity based on slack-based DEA could capture technological change and efficiency catch-up without ignoring slacks. Also, where data is available, a cross-country comparison of savings and credits cooperatives efficiency study may help us get more insight into the cooperative operations.



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# **LUXURY TRAVEL EXPERIENCE: WHAT'S A DISRUPTIVE TOOL AFTER COVID-19 PANDEMIC ?**

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## **ABSTRACT**

Unfortunately, the start of the COVID-19 pandemic in 2019 resulted in a significant fall in tourism activity around the world and strongly disrupted the global travel and tourism. Luxury travel has been growing steadily, although it is a niche market it is still gradually gaining tourism market share within the support of high-net-worth individuals (HNIs) and the rise in living standards of people that interest in a unique luxury experience in their holiday. Thus, experience is a key to better understanding tourists desires. While preceding luxury consumption research has focused more on luxury products' than on luxury services, including luxury experience that consist of intangibility and variability. In addition, the tourists' behavior have shifted from sense of luxury goods ownership towards a sense of being luxury. Therefore, the purpose of this article is to investigate global high-end tourists' behavior and luxury travel experience concepts in initiating experiential marketing approach to luxury tourism as a disruptive tool after COVID-19 pandemic. The integrative luxury travel experience framework provides an insight into marketing strategic implementation in enhancing high-end tourists' experience for entrepreneurship of the luxury tourism businesses to remain their competitiveness. Through identifying and understanding tourists' interest and characteristics of luxury travel trip, as well as to be aware of the disruption that cause the shifted in luxury experience. In order to design unique luxury experience with value creation to create great interaction and satisfy the tourists with memorable experience.

**KEY WORDS:** Luxury Travel, Luxury Experience, High-end Tourists, Disruption, COVID-19

## INTRODUCTION

Tourism is a highly vulnerable industry to various environmental, political, socio-economic risks, whereas it used to and has become resilient with crises and outbreaks (Novelli et al., 2018). In present, tourism industry has come to a halt since the outbreak of COVID-19, its impacts have profound long-term transformations to tourism as socio-economic activity; the multidimensional and interconnected impacts challenging current values and tourism trends (Nations, 2020). The pandemic has disrupted the high-end tourists' interest combining with the ability to purchase and willingness for luxury experience in the trip (Dykins, 2016), in which the new luxury can now also include experiences and authenticity (Park et al., 2010) to be more private, more rapid, and more hygienic concerned (Tourism Authority of Thailand, 2018). Tourists are changing their perceptions and needs of luxury experience, challenging to luxury tourism industry by the evolving needs of modern consumers and embracing these shifts in their niche target and incorporate this transformation (Childs, 2016). This indicates that tourism is linked to luxury, whether through the attitudes of tourists or the destinations they visit (Teodorescu, 2009).

Luxury travel plays a significant role to the global economic growth as one of the fastest growing sectors (Allied Market Research, 2021). Within the increasing number of high-net-worth individual (HNWIs), financial industry classification to denote an individual with a total wealth of \$1 million - \$5 million in liquid financial assets. Thus, they spent on around \$30,000 per year on luxury travel (Capgemini Research Institute, 2020; Ibis World, 2019; ILTM, 2019). They are the most attractive consumers of higher-priced goods and services.

Luxury travel is found in destinations that are perceived to be unique and found in how people choose to travel. It can be called as a high-life tourism that includes all ranges of tourists that is not conditioned by the level of their earnings, since money is never in their concern (Teodorescu, 2009). Within the characteristics of luxury experiences include during travelling, it also defined as a consumption of high-priced and high-quality experiences. As staying in luxury accommodations, tailor-made package holidays or transporting privately belong to such experiences. Likewise, luxury cruises, travel and luxury shopping, with authentic experiences in unexplored destinations (Patrick, Tonner, & Quinn, 2006; Ryan & Page, 2012). While a high standard, unique and authentic services are expected through exclusive experiences designed specifically. The concept of luxury in travel and tourism has seen a shift from traditional luxury products, such as five star resorts, to a large variety of unique and exclusive experiences (Bakker, 2005). The luxury products and service are not limited to tangible materials and financial value, but also give more attention in adding experience and authenticity. It can be initiated that luxury travel can be representing as mass market in modern way that consider as personal, original, and experience based (Yeoman & McMahon-Beattie, 2006).

In the luxury market, a tailored experience with a high degree of customization is about "turning a dream into a reality." It can be incorporated into travelers' daily lives through the definition of life joyfulness, which refers to pleasant sentiments such as warmth, amusement, and felicity (Fox, 2008). Luxury experiences may involve travel to exclusive

resorts, tailor-made packages, and an emphasis on comfort, relaxation, and the service that pays attention to detail the feeling of exclusivity experience and above all the uniqueness (Mossberg, 2007). Higher demand consequently for better service standards with a sense of uniqueness in the ownership of extraordinary which demonstrates in the addition of experiential elements to physical goods and services in travel destinations for unique and premium experience (Kim, 2008). Experience occurs when tourists interact with tourism activities or services that are provided within the destination; by comparing the experience tourists perceived, they can differentiate and take the best tourism attraction preference with expectations for choices (Plessis & Vries, 2016). Tourist experience becomes progressively significant in the core of attention, as means of better understanding tourists desires. It is contrast challenge that luxury tourism industries are facing to improve the exclusive service, while searching for uniqueness to remain competitiveness (Veríssimo & Loureiro, 2013).

Service experiences can become essential part that perceive with psychological ownership and the true part of people's memory of them (Van Boven & Gilovich, 2003). In addition, psychological ownership is more important for self-extension in the case of luxury services than for luxury goods. With the sense of ownership in service context that do not truly involve with objects, reducing a connection between an object and the person than in a goods consumption context (Heffetz, 2012). Likewise, current research shows that psychological ownership of services can replace material ownership needs (Fritze et al., 2020). Therefore, the key factors and characteristics of luxury travel experience are important implications for luxury travel industry but not yet well studied. The luxury products and service are not limited to tangible materials and financial value, but also give more attention in adding experience and authenticity. It can be initiated that luxury travel can be representing as mass market in modern way that consider as personal, original, and experience based. Thus, it has transferred from the concept of luxurious goods consumption (Ryan & Page, 2012).

However, numerous previous luxury consumption researches have focused more on luxury products' than on luxury services (Peng et al., 2019) as well as in relation to demographics (e.g. Heffetz, 2012; Petrick et al., 2006) and consumers' behaviors (e.g. Correia, Kozak, & Reis, 2014; Fedeli, 2011; Holbrook, 2000). The experiential marketing (e.g. Danziger, 2005; Verissimo & Loureiro, 2013; etc.) and experience creation (e.g. Binkhorst & Dekker, 2013; Kim & Ritchie, 2014; Mossberg, 2007; Prahalad & Ramaswamy, 2004; etc.) are also on research demand, determining what constitutes luxury travel, is significant to sustaining this niche market. Despite low demand, the luxury travel market remains profitable due to customized demands for service quality. Indeed, the demand for various types of luxury travel reveals itself in a variety of extravagant ways that can only be met by exclusive. Hence, this article attempts to discuss this issue and to investigate global high-end tourists' behavior and luxury travel experience concepts in initiating experiential marketing approach to luxury tourism as a disruptive tool after COVID-19 pandemic. The integrative luxury travel experience framework provides some new insights and the important key factors into marketing strategic implementation in enhancing high-end tourists' memorable luxury experience for tourism stakeholders, in particular entrepreneurship of the luxury tourism businesses, to remain their competitiveness.

## LUXURY TRAVEL TRENDS AFTER COVID-19 PANDEMIC

The Covid-19 pandemic represents a meta-environmental context pervasively affecting the individual context by affecting travelers' travel decisions, the social context (e. g., by transforming social contacts and interactions), the market context (remodeling competition and changing market boundaries) because of the lockdown and travel restrictions), and also the economic, health, public, and political contexts (De Keyser et al., 2020). The disruptive effects of COVID-19 pandemic cause the luxury travel industry to re-adjust and improve the travelers experience, as it is considered as the core of tourism industry (Kim & Ritchie, 2014), due to the shifting of their interest as mentioned. Despite COVID-19 pandemic has disrupt the luxury travel, it is still a place for individualistic and hedonistic experiences. Luxury travelers are nevertheless looking forward to explore the destinations again within the change of expectations and behavior (AI Global Media, 2021; Carmela, 2020; Childs, 2016).

“Hygiene” is a major concern for enjoying luxury travel experiences at each travel attraction, for instances, to have strict sanitary regulations with smart hygiene technology alike app-based check-ins and scanning QR codes that bypass the interaction with others (Childs, 2016). The second concern is “privacy,” exclusively for a group of HNWI travelers with the concept of less contact and worrying about health and safety. The privacy gives the relaxation experience to a top priority (Carmela, 2020). HNWI travelers can expect at touchpoints along their customer journey; based on the context of the interaction with the service provider, travelers may have very unique experience at each touchpoint (Ryan & Page, 2012; Yeoman & McMahon-Beattie, 2006). Consequently, service providers cannot totally control experiences since travelers construct their own experiences by interpreting a series of encounters and interactions established by the service provider (Zomerdijs & Voss, 2010). As a result, service providers can design the environment in which tourists can participate in and contribute to the production (Cetin and Walls, 2016).

“Long-haul and slow travel with the increasing of international access between countries” will encourage HNWI travelers want to journey longer and further. In addition, fewer trips might be acquired with more quality expected (AI Global Media, 2021). Value is contained in the customized experiences that are built through active tourist interaction (Prahalad and Ramaswamy, 2004), even though value has traditionally been created without taking travelers into account, but with the experience viewpoint, value is now co-produced between firms and travelers (Prahalad & Ramaswamy, 2004). In this setting, high-quality interactions allow travelers to interact and co-create unique experiences, result in new key success factors for luxury market. Hence, price remains a significant factor, but other factors like conspicuousness, uniqueness, social, emotional, and quality are also significant, implying that various travelers have varied demands (Zomerdijs & Voss, 2010). Hence, service providers in the luxury business must constantly develop, redefine, and deepen the luxury value since what was once expensive and outstanding rapidly becomes common, and the sense of specialness is lost (Danziger, 2005).

In sum, the COVID-19-related environmental factors, prohibitions, and worldwide health sanitary concern have altered the tourists' experience (Wen et al., 2020). These changes

associate with future trends in tourism demand, such as the increasing of independent travel, luxury trips with wellness tourism. These developments correspond to projected tourism demand trends, such as the increased popularity of free and independent travel as luxury vacations (Childs, 2016). Furthermore, the tourists will pay more attention to details and may take fewer trips but spend longer at the destinations. Likewise, the rise of responsible travel such as activities that support economic, social or environmental sustainability. One of positives from the global pandemic was the revival of sustainability, environmental reformation. Many travelers have converted into more aware of the roles of the natural world in their travel habits (AI Global Media, 2021; Carmela, 2020; Childs, 2016). Tourists' expectations of luxury alter as they experience it, offering a challenge for service providers who must continually enhance their services to meet their needs by giving whatever they want and expect (Plessis & Vries, 2016).

## **DISRUPTION IN LUXURY TRAVEL EXPERIENCE**

Many explanations to what an experience is, as each personnel recognize the sense of experience differently through cognitive, subconscious, cultural by discussing standards and major values, consider that it is a multi-layered phenomenon (Butler & Scott, 2013; Fox, 2008). Experience may involve a person emotionally, physically and mentally during moments that people feeling conscious in their activities (Mossberg, 2003). Moreover, Fedeli (2011) states that experiences are internal while commodities, goods, and services are external to the consumer, businesses could use experiences to connect with consumer in order to create value. It can be described during moments that people feeling conscious in their activities. Likewise, it can require participation or involvement by a person, and it is varied individually (Knutson & Beck, 2004; Butler & Scott, 2013). Hence, the concept of co-creation may acquire to focus on interactive relationships of customer experience (Binkhorst & Den Dekker, 2013); service providers require to understand that the customer is now becoming a partner in creating value, considering that connection with the tourists can create the experience for them (Prahalad & Ramaswamy, 2000), and encouraging employee by conducting an empowered experience inside the organization (Ramaswamy, 2009).

Luxury experiences provide an opportunity to express distinct identities (Plessis & Vries, 2016) through symbolic consumption in particular moments, as well as activities that can also be times of harmony and self-improvement (Hemetsberger A., von Wallpach S., & Bauer M., 2012). People can modify their identity and self-identity through having luxury experiences, making memories, and learning new things as part of their desire for pleasure and value, which creates an interest to treat themselves with unique, emotional, and memorable experiences and to seek novelty and change (Kapferer & Valette-Florence, 2016). Luxury experience include things such as luxury travel, fine dining, and pampering services (Kim, 2018). It is frequently described by a wide range of products and hospitality services, including distinctive landscape, cuisine, and stunning decor, as well as an integrated travel experience. Privacy, space, and experiences associated with unusual services in a foreign culture are likely to be the main concept (Correia et al., 2014). Luxury tourism experiences are not necessarily associated with expensive brands, as quality tourism expe-

periences are experience rather than trend-led brands that exist in other areas of consumer purchases (Ryan and Page, 2012). Luxury tourism may no longer require five-star accommodations; rather, the remoteness of the place and the personalization of the trip may qualify it as a luxury vacation (Bakker, 2005). Therefore, a luxury travel experience entails refinement, self-improvement, and self-identity (Yeoman & McMahon-Beattie, 2011).

The concept of luxury experience is shifting from value of the material to the experiential, people are choosing to spend their money on experiences with the significance of social status rather than saving up to buy luxurious goods (Yeoman & McMahon-Beattie, 2011), facing the disruption towards a new generation of highly demanding travel consumers as global wealth expands (Danziger, 2005). Therefore, the tourism industry requires the adjustment to understand the tourists' expectation on their service by identifying the factors that are beginning to disrupt the luxury travel. First, the evolving of consumers' tastes, as the awareness of luxury consumption are questioned by the value receiving (Bendell & Kleanthous, 2007). Second, critical transparency as more consumers are becoming aware of some of the industrial background with greater transparency of environmental effects. Third, hyper-connectivity of instant communication technologies is the key driver of to connect with people's values (Waddington, 2012). Professionals may connect with one another in a variety of ways due to online networks like the Luxury Society. It also implies that this market is open to businesses with unique and meaningful identity. The fourth disruptive trend in luxury is geographical. With the rise of China and other Asian countries as markets that allowed mass expansion of existing business models (Giron, 2010). The fifth, trans modernism as the world-view is culturally combination of old and new from around the world. It might better be understood as a paradigm shift to the luxury industry, because it raises questions about what constitutes success and where style leadership comes from (Bendell, 2012).

In the new era of luxury life identified by Tourism Authority of Thailand in 2017, it is difficult to define the specific characteristics to the term luxury because the perception of luxury is individual and depends on real-life experiences individually (Hoffmann & Coste-Manière, 2012). Nonetheless, luxury life can be represented by the following; (1) "identity through purchases" which is the sense of self-satisfaction as being able to present their luxury identity on social media platforms; (2) "secure personal data with luxury security," the HNIW tourists expect the data protection from every services; (3) "luxury for society," the strategy of society charity or social responsibility can enhance the positive experience and image of the tourists; (4) "instant luxury," as the tradition luxury experience are concerned with meticulous experience. The disruption of technology has resulted in instant and abruptly service to be ready at every time; (5) "through customer insight" to reaching travelers' satisfaction require an insight study of their lifestyle to meet their expectations and needs with outstanding and creative way. Furthermore, EHL Insights (2021) consider the 5 C's of luxury travel as new definition of luxury travel experience as it is a group of principles that engage consumers emotionally and physically before, during, and after a travel experience. First, culture: luxury travelers want to have new experiences about cultural heritage and local culture while abroad. Second, cuisine: luxury travelers seek out culinary experiences, with local sourcing and sustainability issues are involved. Third, community: while luxury travelers may not want shared travel experiences but they do



want community. Fourth, content: real-time experience with easy access and storytelling is important. Fifth, customization: by allowing travelers to select their own activities. As mentioned, traditional perceptions of luxury travel are challenged by the evolving needs of modern consumers.

## **TOURISM CONCEPT WITH LUXURY TRAVEL**

The understanding of luxury concept has evolving over time, as well as representing social norms and consumers interests at that period (Bendell, 2012). While the oldest human-worked gold that consider as the first luxury object, found in 5,000 BC in the Varna Necropolis in Bulgaria, have concluded that they were made as jewelry, not for money or weapons. This points out that the interest of human were strongly about beauty appearance, rather than more practical matters (Higham et al., 2007). Likewise, many products that were once considered luxury become more approachable and include in social development. Luxury can be divided into two groups, “old luxury” and “new luxury” (Danziger, 2005). Old luxury usually refers to older generations with wealthy family so products were designed with the sense of owning the luxury status (Hemetsberger et al., 2012). On the other hand, new luxury is the concept of personal experience, self-care or individually concern, the quality-of-life development and to satisfy personal needs. With this new luxury trend, it is about spending more on experiences and lifestyle enhancements rather than products (Derzhaev, 2010).

Luxury is an abstract concept as its meaning is determined by personal and interpersonal dimensions, subsequently, the term “Luxury” has a broad concept that people perceived in various definitions (Hoffmann & Coste-Manière, 2012). The definition of the luxury is based on a number of physical factors, including the perception of a particular traveler. Under a multidimensional perspective, scarce and rare products are considered luxuries (Plessis & Vries, 2016). In the meaning of products and services, luxury is extra need over the boundary daily basis, considering with pricing, quality, and rarity beyond general attributes (Teodorescu, 2009). Luxury goods might be perceived as “psychologically further away” by ordinary consumers, as there were infrequently to achieve such products or services and it represent the social status of the buyer (Hansen & Wänke, 2011). Whereas the image of several products was considered luxurious from the perspective of the society, not everyone will agree that the goods or the service is luxury or a necessity. Therefore, it is a chance to criticize this opportunity to boost the potential levels (Heffetz, 2012). Luxury is about being able to reach and owning best products, it is the feeling of simplicity and effortlessness but not completely necessary and majorly involved with the perception of the tourists and recognition of experiences (Veríssimo & Loureiro, 2013). However, due to its subjective nature that relies on tourist motivations, recommendations and products are more effective than service (Heine & Phan, 2011).

With the development of new tourism products and services, the character of luxury travel market has become more diverse and unclear (Fedeli, 2011). The luxury products and service are not limited to tangible materials and financial value, but also give more attention in adding experience and authenticity experiences (Hoffmann & Coste-Manière,

2012). It can be initiated that luxury travel can be representing as mass market in modern way that consider as personal, original, and experience based. Thus, it has transferred from the concept of luxurious goods consumption to travel experiences as a goal (Bendell & Kleanthous, 2007). The main characteristics of luxury travel services are concern with (1) privacy of tourists without any interruption; (2) personalization of tourist with the unique service provided individually; (3) simplicity and perfection of service in every detail of all the processes; (4) authenticity for exotic destinations and different culture; and (5) comfort and safety feeling of tourists (Veríssimo & Loureiro, 2013). The characteristic of HNWI travel trip is the summary of their lifestyle, it is leisure trip with the huge amount of budget based on travel motivations that are frequently on escaping from daily life (Powell, 2017). Four essential factors emerge in order to integrate the key components of luxury travel into the context of tourism; connection to tourists, differentiate offering, competitive advantage and value creation (Knutson & Beck, 2004).

The global luxury travel can be grouped into six main categories that contains specific details as follows. (1) gastronomy: food and drink consumption are the largest part and one of the most important part. Majority of HNWI are expecting to explore new sense of gastronomy culture during travel. (2) cultural activities: HNWI travelers pay high interest on cultural activities, as to enriching the travel experience by deepen the connection with a destination's history such as visiting historical landmarks and museums and galleries. (3) wellness: luxury travel is now encounter with self-care by taking care of individual's health, both mentally and physically. (4) sporting events: is the attraction of being unscripted and unpredictable. Attending an occasion such as a sports match can be part of the cultural experience. (5) performance arts: attending an art performance, making the tourists receiving positive experience and memories by the unique culture of each destination. And (6) outdoor pursuits: the activities qualifying as outdoor pursuits are vary with each destination, offers great experience for travelers by being closer to nature to admire the beauty of the attraction (ILTM, 2019; Powell, 2017).

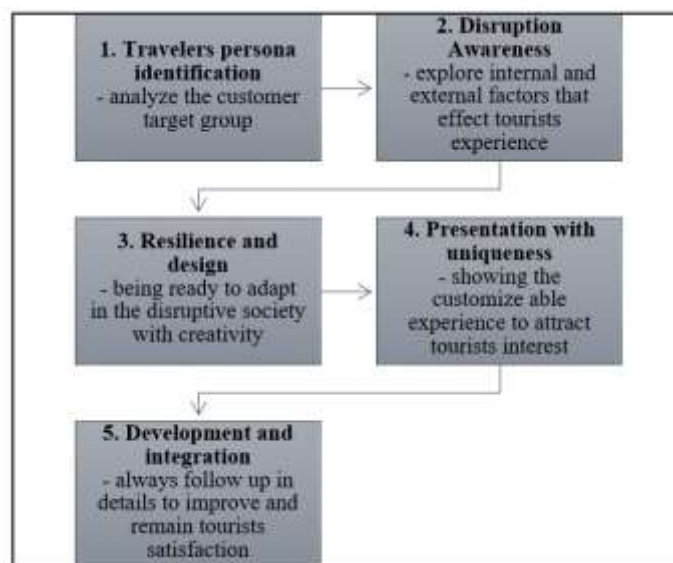
## **EXPERIENTIAL LUXURY TRAVEL MARKETING APPROACH**

Experiences are considered as the key for providing tourists needs with understanding their interest and expectation (Derzhaev, 2010), in addition to the main role of experiences to engaging customers through memorable experiences as the new economic offering (Pine & Gilmore, 2000). In the experiential approach, intangible elements connected with emotional values is necessary (Bendell, 2012). Besides, experiential marketing focusing on consumer experiences and considering consumption as a holistic experience (Mossberg 2007; Lee & Hwang 2011), marketing researchers and practitioners have shown their attention to improve successful businesses. Subjectively-based “experiential” aspects of the consumption experience with the concept that individuals also respond to and react to experiences that they receive and therefore put interaction at the heart of the experience (Pine & Gilmore, 2000), including three F's “fantasy, feelings and fun” that recently was extended to four E's “experience, entertainment, exhibitionism and evangelizing (Holbrook, 2000). In addition, there are a five-step program of customer experience management initiated by Waddington (2012) involved analyzing the customer's interest, deliver-

ing emotional, cognitive, behavioral and value to customers, to which social and informational based value can be added. The experience depends on the individuals mood, state of mind, and how reacts to the interaction with the staged event (Mossberg, 2007).

For luxury market, price is still a very important component, but values as conspicuous, uniqueness, social, emotional and quality are also important to luxury market, propounding that different consumers have different desires (Bigham, 2008). However, the 85% of senior business managers believe that differentiating focuses only on the traditional elements, such as price, product and quality, and it is no longer a sustainable competitive advantage, and so, senior managers hold the customer experience as the next competitive battleground (Shaw and Ivens, 2005). In addition to a survey with marketing professionals, 70% of the respondents report the experience factor as being very important to their organizations and indicated their intention to employ it more widely in the future (Bigham, 2008). Congregate concepts of customer experience and exchanged value are encapsulated in their mutual relations and the interrelations with the main entities (the company and the consume) (Gentile et al., 2007). Therefore, intending go further in understanding the experience in tourism context, the current research foment experiential approach to hospitality services based on Gentile's et al.'s (2007) model, and focusing on company side by identifying how businesses create an environment to develop experiences for customers. Consequently, tourists' interests and expectations are understood through experiences, which are believed to be the essential to satisfy their demands. Luxury travel business provider required the attention in tourism context by focusing on experiential marketing approach, which considers luxury travel consumption as a whole. Additionally, the experiential marketing of luxury products and services is not limited to tangible goods and value, but also includes experience and authenticity, and how they engage with luxury vacations.

**FIGURE 1:** Experiential Luxury Travel Marketing Approach



Source: Author

Based on relevant literature review, Figure 1 shows the summary of experiential luxury travel marketing approach that provide the overview of applying experiential marketing concept into luxury travel experience creation. This approach consists of five processes; to specify an insight into marketing strategic implementation in enhancing high-end tourists' experience. (1) identify the travelers persona data, in this luxury travel approach the tourists target is the HNWI travelers in the definition of Capgemini Research Institute (2020) and ILTM (2019). (2) discover and aware of the disruption occurring in the luxury travel industry as Bendell (2012) has identified the key trends that disrupt the luxury industry, involved with both internal factors (shifting of traveler needs and interests) and external factors (technology connectivity). (3) resilience from disruptions and prepare to design of new luxury experience that going to serve the HNWI travelers expectations as Tourism Authority of Thailand (2017) has reported that the new luxury life require creativities. (4) present the experience that have designed pleasantly through service and activities with being able to customize (Ryan & Page, 2012). (5) development and integration, ensure that there is attention to improve in order to satisfy the travelers at every touch points.

## **IMPLICATION OF LUXURY TRAVEL EXPERIENCE AS A DISRUPTIVE TOOL**

Constructed on the synthesis of literature review, it is possible to define some advantage of using the experiential luxury travel marketing approach above (Figure 1) for luxury travel experience implication using as a disruptive tool for luxury travel industry. Five stages are provided in Figure 2 Integrative luxury travel experience framework for luxury travel industry readiness in support of the HNWI travelers' luxury experience process in the context of post COVID-19 pandemic. Thus, more details are provided, describing the disruptive tools, techniques, and suggestions in support of the implementation process.

1) HNWI traveler's identification: by defining the target group will allow the firm to specify the position of services. Luxury travelers have specific needs, interests, and more expectation than other travelers. Therefore, being able to provide the luxury travelers with unique service that matches their personality individually is required.

2) Luxury experience disruption awareness: With the disruption of COVID-19 has resulted in instant service to be ready at all time and platforms. As well as travelers' expectations have shifted many ways that oriented with social status as mentioned. For that reason, creative and outstanding experience are strongly expected to meet their satisfaction.

3) HNWI experience design: First, identify the changes in luxury experience by exploring the society and HNWI travelers' behavior. Then identify the strength and positive experience of the firm as well as the negative experience of outcomes or service failures. Lastly, design new service to satisfy HNWI travelers that considered with the matching of recent trends and travelers' behavior.

4) Unique experience offering: The character of HNWI is being able to choose with the high quality of life with greater expectation during journey. Therefore, luxury travel firms should provide choices for them to choose their own experience. This can be the oppor-

tunity for travel industry to offer and to create their own experience that could not be found at any destination and causing revisit intention.

5) Value creation: By connecting the travelers' and firms to be interact with storytelling, culture and authentic experience that differs from other destination. Also, supporting a cross-functional working group in the firm to implement travelers experience. In addition, being able to recognize their lifestyle and personal details, especially in luxury industry, in order to know the type of experience that could be co-created with exclusive sense of services.

**FIGURE 2:** Integrative Luxury Travel Experience Framework



Source: Author

## CONCLUSION AND RECOMMENDATION

The luxury travel industry around the world effected by COVID-19 pandemic which make change in the viewpoints by considering previously ignored issues, such as potential travelers' emerging focus in the hygiene and sanitation of places, medical facilities, and population density. The COVID-19 pandemic also provides an opportunity to rethink about tourist planning and development in order to assure long-term sustainability. Stakeholders can still gain competitive advantage through identification of the customers interests to connecting them with their needs and requirements, as well as distinguishing offers which will provide an environment that enhances the customer's experience, involving subjective and emotional factors. Within the match of tourists expectations of instant experience pro-

vided in the disruptive society. As tourists prefer quiet destinations after the outbreak. In addition to their behavior that is tending to shift their interest from the sense of luxury goods ownership towards a sense of being luxury which beyond just simple products and services. As well as, creating value that create better interactions to create unique experiences. Therefore, while the Covid-19 pandemic has created disruption and challenges for the luxury travel, it currently opens the way for new marketing opportunities. Although luxury travelers have a lot of purchasing power, it's necessary for luxury service provider to ensure that they get good value and satisfy with nice experience. As the concept of luxury experience is constantly evolving, this study provides some new insights of luxury experience and the important key factors that can be used as a disruptive tool after COVID-19 pandemic for entrepreneurs, academic sectors, and stakeholders. Further empirical research is needed to analyze the specific dimensions and key factors of luxury experience and explore the relationships between the elements in order to completely understand its impact to luxury travel industry. The results will allow contributing for theoretical that brings new value to the academic discussion of luxury travel and practical implication to luxury travel industry.

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# **THAILAND, A DESTINATION SELECTION FOR CHINESE TOURISTS DURING THE OUTBREAK OF COVID-19**

by

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## **ABSTRACT**

In the context of the global spread of Covid-19, this study examines the relationship between three dimensions that influence the revisit intention to Thailand of Chinese tourists; perception control of China during the outbreak of Covid-19 (PCC), perception control of Thailand during the outbreak of Covid-19 (PCT), perception of cleanliness and safety towards Thailand hospitality (PSCC). The study found that PCT and PSCC have a statistically significant impact on the revisit intention of Chinese tourists during the outbreak of covid-19. Specifically, this study contributes to the development of the theory, thus confirming that Chinese travelers will choose their travel destinations through PCT and PSCC. Although quantitative methods do not provide specific solutions, exploratory qualitative data has further to explained these variables. In addition, based on analysis results, it is concluded that two main factors have a significant impact on Chinese tourists' revisit to Thailand during the outbreak of Covid-19. Therefore, more attention can be paid to these two factors in future research. The result of this study could serve as a foundation for further research about revisit intention in the future. For instance, age, and income could be further investigated to observe the impact of these factors on perception and revisit intention more clearly.

**KEY WORDS:** Revisit intention, Covid-19, Chinese tourist

## INTRODUCTION

As of 9th April 2020, the Covid-19 has rapidly spread to over 203 countries and has been declared a global health emergency by the World Health Organization (WHO). The Covid-19 has given a significant impact on tourism industry development worldwide (Bakar & Rosbi, 2020). The tourism sector will continue to deteriorate as more and more countries lock their borders and impose restrictions (Jeff, 2020). The Tourism Council of Thailand reveals that the tourist industry constitutes 20 percent of Thailand's GDP. Some 7.7 million Thais work in tourism and its related industries. The impact of the Covid-19 pandemic on the Thai people and the tourist industry is tremendous (Seneviratne, 2021). Chinese tourists account for the most significant percentage (30%) of total international tourists visiting Thailand, so It plays a vital role in underpinning the nation's tourism sector. In January 2020, Thailand felt the impact of Covid-19 as soon as China started a travel ban and imposed a lockdown on Wuhan City (Jeff, 2020). According to this statement, it shows that Chinese tourists are the most significant proportion of tourists visiting Thailand. Moreover, due to travel restrictions during the outbreak of Covid-19, Chinese consumers still have a strong needs to travel (Hotelworks, 2020), and Thailand is one of their selected destination. Thus, in the context of such an outbreak, the researchers came up with the following research questions. They are what happens to tourists' perception towards the control of the Covid-19 outbreak in Thailand, to the control of the Covid-19 outbreak in China, and to the cleanliness and safety at hospitality in Thailand and travel intentions? Thus, for this study, the researcher would like to examine Chinese tourists' perceptions towards the control of Covid-19 in China and Thailand, so as to know what impact their revisit intention when they select Thailand as their destination during the Covid-19 outbreak? And the researcher hopes that this study can help tourism practitioners and policymakers to further understand the importance of effective control of Covid-19 in Thailand and helps to build travel confidence among Chinese tourists and encourage them to revisit Thailand.

## LITERATURE REVIEW

This section is based on the relevant literature of The Theory of Planned Behavior (Ajzen, 1991). The TPB is considered as a representative social psychological theory in the understanding of specific human behavior. To improve the usefulness of the TPB, Perugini, and Bagozzi (2001) proposed the model of MGB which includes all original variables in the TPB but redefines their role as indirectly affecting behavioral intention through desire. They also claimed that motivational, affective, and habitual processes should be included in the social-psychological model in order to better comprehend human behavior. In terms of habitual processes, past behavior was suggested as a significant determinant of human decisions (Aarts, Verplanken & Knippenberg, 1998). So, to better understand specific human behavior the MGB incorporates desire, positive and negative anticipated emotions, and past behaviors as well as the original variables of the TPB. Therefore, the MGB incorporates desire, positive and negative anticipated emotions, and past behaviors besides the original variables of the TPB. In which the paper discusses important aspects of perception towards the control of the Covid-19 in Thailand (PCT) and perception towards the control of the Covid-19 in China (PCC), and Cleanliness, and safety at hospitality (PSCC), and

impact Chinese tourists' revisit intention about destination select. The hypotheses also were developed for empirical tests.

### **The perception control of China during the outbreak of Covid-19**

Before the Covid-19 outbreak, severe acute respiratory syndrome (SARS) already caused the first pandemic of the 21st century (Zhong et al., 2003), so understanding the impact of SARS on China's overall economy and tourism economy is very helpful in understanding the extent to which Covid-19 affects potential visitors, changes in tourist behavior, and their safety and public health concerns. Generally speaking, the impact of SARS is sudden and timely, and the reduction in travel and tourism is caused by a combination of internal motivations, external enforcement measures, and travel bans. (Zhang, et. al., 2005). As for the influence of SARS on tourist consumption, Liu Feng (2003) pointed out that the influence of SARS on consumption was mainly psychological. In addition, in crisis management, the establishment of information systems plays a vital role in reducing the negative effects of the crisis. The more the public knows, the less fear and more confidence they have. Highly transparent information systems and effective emergency measures will contribute to market recovery. Generally speaking, the travel reduction in Chinese tourists' is due to the combination of internal panic, psychological, and external enforcement measures such as travel bans. SARS has aroused public concern about health problems. Health and safety will be important factors when people make travel and tourism decisions. For tourist supplies and services, improved hygiene will be an important factor in improving the image of destinations and businesses (Zhang, et. al., 2005).

Immediately after the Covid-19 outbreak, the Chinese government publicly Shared information about the virus in late January 2020. Next, the Chinese government took more stringent preventive measures than the SARS outbreak in 2003, such as city lockdowns, large-scale community quarantines, and temporary business shutdowns swept across Chinese cities.

### **The perception control of Thailand and other countries during the outbreak of Covid-19**

Existing literature has shown that tourists' perceptions of destination risk notably affect their destination choices and revisit intentions (Hasan et. Al, 2017), and perceived travel risk has been indicated to have significant impacts on tourist behavior (Ritchie et. al., 2016). In addition, Sun (2014) has noted that perceived risk has a considerable influence on tourists' attitudes. Most tourists might be influenced by news and images portrayed by the mass media, although in reality, it may not be that bad. Irvine and Anderson (2006) found that risk perception influences tourists' behavior to avoid or cancel their traveling plans. In general, tourists make their travel decisions based on perceptions rather than reality (Roehl & Fesenmaier, 1992).

On 23rd March 2020, with the increasing number of infections, the Government of Thailand immediately implemented administrative control measures and non-mandatory personal protection measures (NPI: Non-pharmaceutical interventions) as instructed by the

World Health Organization. Administrative measures include: a state of emergency to prevent the novel Coronavirus from spreading, quarantine of infected patients, the Thai state will close its borders to all foreign tourists, ban all inbound international passenger flights, ban social gatherings, domestic travel restrictions, close all schools, and even close nationwide night curfews (Lee, Song, Bendle, Kim & Han, 2012). Individual non-mandatory personal protection measures include social alienation and personal health protection. The Internet's complementary NPI is the role of keeping the global public up to date and contacting medical experts seeking to identify new viruses. In addition, the establishment of effective communication systems and emergency measures will help to restore the tourist market. (Randy, 2020)

#### The perception of cleanliness and safety towards Thailand hospitality

Fishbein and Ajzen (1975) pointed out that the attitude towards things can be understood as the positive or negative assessment of personal goals. People form their attitudes, interests, and opinions through their perceptions acquired in daily life (Oliver, 1997). Sonmez & Graefe (1998) pointed out that perceived security plays a crucial role in the decision-making process of tourists because personal safety is the primary consideration. In fact, Safety is the second-highest need above basic need as suggested in Maslow's Hierarchy of needs. It may be more significant to international tourists as they are dealing with an unfamiliar environment, different cultural backgrounds, probable language barriers, and so on.

The outbreak of Covid-19 has a huge negative impact on the tourism industry, because tourists generally lack information on the origin, prevention, and treatment of diseases, thus exacerbating panic and anxiety (Wu, Law, & Jiang, 2010). Beirman (2003) further pointed out that the perception of safety and security is a major determinant in travelers' decisions to visit a place. There is no doubt that tourism is highly dependent on safety and security. So when tourists' perceived safety is considered as the primary need, it will play a positive role in the travel choice of tourists if the destination's tourism facilities (such as hotels) can meet the tourists' needs for a safe and clean tourism environment.

#### Intention of tourists to revisit destinations.

Revisit intention is the possibility that a tourist performs a specific behavior (Ajzen, 1991). Planned behavior theory (TPB) is widely used to explain the complex travel decision-making process of tourists' (Lam & Hsu, 2006). Lam & Hsu (2006) found that TPB provided a reasonable explanation for the potential travel intention of Chinese tourists. The study highlights the importance of factors such as perceived safety and perceived behavioral control for such groups. Within the studies on the intention to revisit, it is noted that customer attitude is an important criterion for both revisits (Guntoro and Hui, 2013). While Vincent and Thompson (2002) said that tourist attitudes consist of cognitive, affective, and behavioral components and he describes tourist's attitudes as psychological expressed by the positive or negative evaluations of tourists when they engaged in certain behaviors (Schiffman & Kanuk, 1994).

Moreover, a study from Tarkiainen and Sundqvist (2005) concluded that there is a significant positive relationship between the attitude of destination and the intention to travel. The more positive the attitude in regard to a behavior, the stronger is the tourists' revisit intention to perform the behavior under consideration. Thus, in this study, the tourist's revisit intention is defined as "positive tourist's attitudes toward a destination, which was a result of perception toward a destination." Petrick et. al., (2001) further stated that the number of visits by the tourists to the same destination also affects the intention to revisit. It has been suggested in many studies that the tourists who have visited the destination before had a higher intention to revisit compared to first-time visitors (Kozak and Rimmington, 2000). A positive destination image and its direct effect on tourists' intention to revisit (Chew & Jahari, 2014).

In this study, the researcher applies the theoretical framework of planned behavior (Ajzen, 1991), and proposed the following hypothesis based on the research background and problem:

**H1:** The perception towards the control of the Covid-19 outbreak in China has affected Chinese tourists' intention to revisit Thailand.

**H2:** The perception towards the control of the Covid-19 outbreak in Thailand has affected Chinese tourists' intention to revisit Thailand.

**H3:** The perception towards cleanliness and safety, relating to the Covid-19 outbreak, at hospitality in Thailand has affected on Chinese tourists' intention to revisit Thailand.

## METHODOLOGY

This study used a quantitative research approach. The quantitative approach can reach a higher sample size. A larger sample makes it less likely that outliers in the study group can adversely impact the results you want to achieve impartially. This makes the data researcher gather more reliable and less open to argument. (Queirós et. al., 2017)

The population of this study is Chinese travelers who have visited Thailand. The Thailand Travel Sentiment Survey shows (Hotelworks. 2020) approximately 11 million Chinese travelers visited Thailand in 2019. Thus, the population of this study is 11 million. Then, the researcher used the table of Krejcie & Morgan's (1970) to find the proper number of the sample for this study. The sample size of this study, therefore, is 384. The researcher uses simple random sampling, collected the primary data from online channels (QQ and WeChat) because it is very convenient and saves costs. One of the main features of QQ and WeChat is its vast number of Groups: chat rooms where up to one thousand people can join a conversation together. Groups can be either public or private and the members consist of the people that have been visited Thailand. It's a popular platform of community to find new friends and people sharing interests or experiences, a function similar to the Facebook group.

From August 26 to September 26, 2020, the researcher used a famous online survey platform called "WenJuan Star" to create the link of the questionnaires, then distributed a link to the relevant WeChat or QQ groups to start data collection. In this study, upon obtaining the respondent's consent, he/she was asked to complete the questionnaire online; after completing a questionnaire he/she obtained a random cash reward. The period of time for distributing questionnaires is from Monday to Sunday during 17:00-20:00 because this period is WeChat and QQ users active peak. The researcher stopped collecting questionnaires when collected 439 questionnaires on 26th September 2020. Due to previously mentioned, the sample size for this study is 384. However, in order to avoid the problem of missing data, the researcher collected a sample more than the expected sample size.

In terms of data analysis, the researcher cleans the original data first and deletes invalid questionnaires; then selects 30 samples for reliability analysis. After the reliability analysis is qualified, the researcher used SPSS to further analyze data, including descriptive, T-test, and Regression.

|                                                     | Frequency | Percentage |
|-----------------------------------------------------|-----------|------------|
| <b>Gender</b>                                       |           |            |
| Male                                                | 220       | 50.1       |
| Female                                              | 219       | 49.9       |
| <b>Age</b>                                          |           |            |
| 26-35 years old                                     | 146       | 33.3       |
| <b>Education</b>                                    |           |            |
| Bachelor degree                                     | 241       | 54.9       |
| <b>Occupation</b>                                   |           |            |
| Private sector employee                             | 139       | 31.7       |
| <b>Monthly Income</b>                               |           |            |
| 5000 yuan to 10000 yuan                             | 156       | 35.5       |
| <b>Times you visited Thailand</b>                   |           |            |
| 1 time                                              | 144       | 32.8       |
| <b>Length of stay in each time</b>                  |           |            |
| 4-6 days                                            | 196       | 44.65      |
| <b>The money spent when visiting Thailand</b>       |           |            |
| 10001-15000 yuan                                    | 151       | 34.4       |
| <b>Way/channel to get travel information</b>        |           |            |
| The Internet                                        | 327       | 74.32      |
| <b>Type of accommodation selected when visiting</b> |           |            |
| Hotel or resort                                     | 394       | 89.55      |

The demographic factors of this research which collected data consist of gender, age, monthly income, education levels, and occupations. First of all, according to the demographic information of respondents, it is found out that the ratio of males (50.1%) and fe-

males (49.9%) is almost equal. Between the ages of 26-35 years old is the majority which accounts for 44.5% of the total respondents. Most of the annual income is 5000-1000 Yuan. Most respondents have received good education mainly because their education level was a Bachelor's degree of 54.9%, followed by a Master's degree or above at 28.5%. The majority of their occupation were Private sector employees 31.7% and followed by 21.4% were Professionals such as Lawyers or Doctors, etc.

In terms of travel characteristics, this research which was used to collect data consists of the number of visits to Thailand, the length of stay each time, and the money spent when visiting Thailand. The result indicated that 32.8% visited Thailand for one time, stayed in Thailand 4-6 days about 44.65%, and 21.41% of them spent more than 15001 yuan in Thailand; and the main type of accommodation when visited Thailand, the majority of the respondents 89.55% choose Hotel or resort. The main way to get travel information channels was the Internet with 74.32%. Then followed by Friends and relatives with 46.14% respectively.

| <b>The Perception control of China during the outbreak of Covid-19</b>                                  | <b>Mean</b> | <b>Std. Error</b> | <b>Average Level</b> |
|---------------------------------------------------------------------------------------------------------|-------------|-------------------|----------------------|
| The Covid-19 outbreak in China led me to cancel my travel plans                                         | 3.7         | 0.063             | Agree                |
| Total                                                                                                   | 3.56        | 0.06              | Agree                |
| <b>The Perception control of Thailand during the outbreak of Covid-19</b>                               |             |                   |                      |
| The Covid-19 outbreak in Thailand has heightened my concerns about travel health and safety in Thailand | 3.56        | 0.058             | Agree                |
| Total                                                                                                   | 3.46        | 0.06              | Agree                |
| <b>The perception cleanliness and safety towards Thailand hospitality</b>                               |             |                   |                      |
| Thailand's public transportation hygiene measures on Covid-19 ensure my safety revisit to Thailand      | 3.42        | 0.06              | Agree                |
| Total                                                                                                   | 3.40        | 0.06              | Neutral              |
| <b>Intention of tourists to revisit destinations</b>                                                    |             |                   |                      |
| I intend to revisit Thailand during the outbreak of Covid-19.                                           | 3.43        | 0.047             | Agree                |
| Total                                                                                                   | 3.34        | 0.05              | Neutral              |



This part is a Likert scale as an interval scale ranging from 1-5. In terms of descriptive statistics of the perception control of China during the outbreak of Covid-19 found that “The Covid-19 outbreak in China led me to cancel my travel plans” earned the highest average score with = 3.7 and SE = 0.063. The average of overall factors was weighted at = 3.56 and SE = 0.06. In terms of descriptive statistics, the Perception control of Thailand during the outbreak of Covid-19 found that “The Covid-19 outbreak in Thailand has heightened my concerns about travel health and safety in Thailand” earned the highest average score with = 3.56 and SE = 0.058. The average of overall factors was weighted at = 3.46 and SE = 0.06. In terms of descriptive statistics of the perception of cleanliness and safety towards Thailand hospitality found that “Thailand's public transportation hygiene measures on Covid-19 ensure my safety revisit to Thailand” earn the highest average score with = 3.42 and SE = 0.06. The average of overall factors was weighted at = 3.40 and SE = 0.06. In terms of descriptive statistics of intention of tourists to revisit destinations found that “I intend to revisit Thailand during the outbreak of Covid-19. ” earn the highest average score with = 3.43 and SE = 0.047. The average of overall factors was weighted at = 3.34 and SE = 0.05.

## Hypothesis Tests

Using Multiple Regression Analysis (MRA) for the data analysis defined the statistical data in order to find whether the hypothesis is accepted or rejected which this research studies the factor that influenced tourists to revisit intention. For the conditions of hypothesis testing which were indicated by MRA (Multiple Regression Analysis), when the hypothesis testing result has a statistically significant level less than 0.05 (Significant level 95%), the hypothesis will be accepted but when the hypothesis testing result has a significant level more than 0.05 (Significant level 95%), the hypothesis will be rejected.

## Result of Multiple Regression Analysis

|            | <b>Quadratic Sum</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b> |
|------------|----------------------|-----------|--------------------|----------|-------------|
| Regression | 23.11                | 3         | 7.703              | 20.462   | .000b       |
| Residual   | 164.146              | 436       | 0.376              |          |             |
| Total      | 187.256              | 439       |                    |          |             |

Dependent Variable : CTRIT

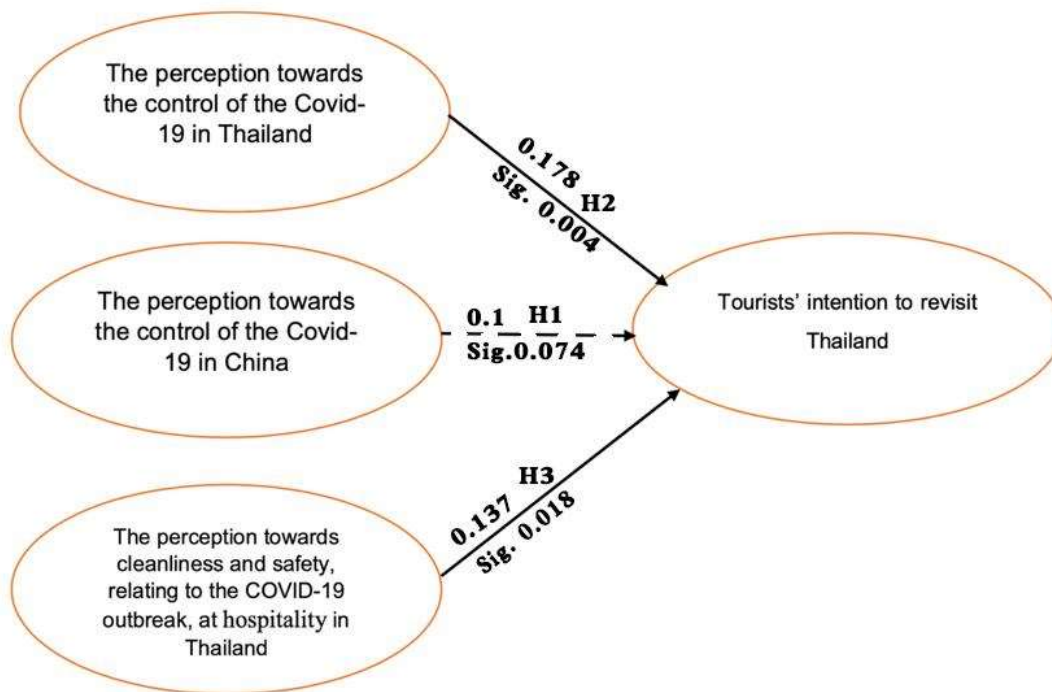
Predictor Variable : (Constant), PCC, PCT, PSCC

The result of ANOVA analysis shows that the P value is less than 5% , therefore, at least one independent variable has a relationship with the dependent variable. From Table 4-16, R-square explains: 12.3% of the variation of the dependent variable can be explained by the independent variable, the other 87.7% variation of the dependent variable is explained by other factors, such as visa policy or tourism recovery plan, etc.

## Result Hypothesis Test

| Hypothesis Test, Dependent Construct = CTRIT |                        |                        |          |
|----------------------------------------------|------------------------|------------------------|----------|
| Independent Constructs                       | Estimated Coefficients | Significant at P-value | R-square |
| PCC                                          | 0.1                    | 0.074                  | 0.123    |
| PCT                                          | 0.178                  | 0.004                  |          |
| PSCC                                         | 0.137                  | 0.018                  |          |

The factor influence Chinese tourist revisit intention analysis could be summarized that among all tourist revisit intention factors, the perception control of Thailand (PCT) got the highest score compared with other factors by sig value = 0.004, so have a statistically significant impact on tourist revisit intention; the second is the perception cleanliness and safety towards Thailand (PSCC) hospitality by sig value= 0.018. The last is the perception control of China (PCC) is sig value = 0.074 which no statistically significant impact on the intention to revisit Thailand.



## DISCUSSION AND CONCLUSION

The results of this study provide insights into PCC, PCT, PSCC, and CTRIT. In this part, the findings will be discussed and compared with previous studies. The perception control of Thailand during the outbreak of Covid-19(PCT) has a statistically significant influence on their tourist revisit intention to Thailand. This study indicates that most of the respondents are agreed on all dimensions of PCT. Moreover, it is shown in the result that the risk of travel with those dimensions has fluence on Chinese tourists' revisit intention. while Hasan, M.K (2017) further explained that tourists' perceptions of destination risk notably affect their destination choices and revisit intentions, and perceived travel risk has been indicated to have significant impacts on tourist behavior. It means that, if the travel risk of those dimensions is decreased, Chinese tourists' revisit intention will be increased. The perception of cleanliness and safety towards Thailand (PSCC) hospitality has a statistically significant influence on their tourist revisit intention to Thailand. The outbreak of Covid-19 has a huge negative impact on the tourism industry, because tourists generally lack information on the origin, prevention, and treatment of diseases, thus exacerbating the panic and anxiety (Wu, Law, &Jiang, 2010). So personal safety and the safety of the environment would be the first needs when consumers choice of a tourist destination (Antonio, 2020). Generally speaking, this finding is also proved by the previous study of Zhang, et. al., (2005) stating that the reduction in travel and tourism is due to the combination of internal incentives and external enforcement.

The contribution of this study is to understand the impact of the Covid-19 on the tourism revisit intention of Chinese tourists because the importance of Chinese tourists for the recovery of Thailand's tourism industry is beyond doubt. Understanding their revisit intentions will lead to making policy and promotional adjustments more flexible based on these preferences, so as to help the restoration of the tourism industry and the development of the Thai economy. And, the following recommendations from this study may be beneficial to the tourism industry, and tourism stakeholders, such as the Tourism Authority of Thailand, travel agencies, hotels, etc.

According to the results of regression analysis, the Thai government policy about the prevention and control measures of Covid-19 has the largest significant impact on Chinese tourist's revisit intention to Thailand, so how to effectively controlling the Covid-19 is the most important thing for the government right now. Meanwhile, according to the infection prevention and control guidance - Covid-19 of the WHO, the researcher found that vaccination is currently the most effective way to control the Covid-19, so it is very urgent to improve the coverage of the vaccine among Thailand people. At present, in the case of limited vaccines, it becomes particularly important that priority supply to key populations and areas, such as relevant tourism workers and medical workers.

According to the results of data analysis, Chinese tourists often collect travel information through the Internet, so if the Tourism Authority of Thailand can timely update the daily situation that the fight results with Covid-19 on China's popular social media. It will show the determination and progress in fighting the Covid-19 in a more transparent way, so it will have a positive impact on the revisit intention to Thailand of Chinese tourists. The

safety and cleanliness of Thai hospitality have played an important role in destination selection, especially during an outbreak of covid-19, therefore it should be vaccinating airport and aircraft staff first, followed by hotel staff and attraction spots staff.

Data show that the flight ban in Thailand has a negative effect on the revisit intention of Chinese tourists, if airlines can open more flights and offer ticket discounts, it will have a positive impact on the return intention of Chinese tourists. In addition, except the Thailand related tourism practitioners should keep strict prevention of the Covid-19, at the same time, they also should try to encourage local Thai people consumption, so as to help to enhance the confidence of the foreign tourists revisits to Thailand, on the other hand, it is able to ensure these relevant tourism practitioners can survive in this crisis.

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# **THE GUIDELINES FOR POTENTIAL ENHANCEMENT OF SUSTAINABLE CREATIVE TOURISM UNDER THE SUFFICIENCY ECONOMY PRINCIPLES**

by

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## **ABSTRACT**

This research aimed to build guidelines for potential enhancement of sustainable creative tourism development following the sufficiency economy principles, which focused on human resource as a core of sustainable development by providing the local people knowledge through workshop training and brainstorming sessions with tourism related groups of people in the area. The study found that this area had a high potential and strengths in the area to promote tourism due to its many cultural and nature tourism sites and the local way of life which is based on sufficiency economy and also a variety of tourism activities. However, the community still lacked good tourism management and development. Moreover, another crucial weakness of the area was that the locals still needed necessary tourism management knowledge and practical skills.

The research was conducted with the participatory research in the area of lower Mae Wang watershed villages including Mae Sapok, Mae Moot, Sob Win, Huey Pong and Mai Wangpagoon. 50 research participants in these villages are the representatives of the residents and tourism stakeholders in joining the focus group discussion and the workshop training in order to create the guidelines for potential enhancement of sustainable creative tourism under the sufficiency economy principles. The questionnaire results of local satisfaction on the workshop training for the creative tourism development under sufficiency economy principles found that most participants were satisfied to this training. The guidelines could serve as a tool to enhance the community's potential and to lead to further development for sustainability in the future.

**KEY WORDS:** Tourism Destination Management, Sufficiency economy, Sustainable Tourism Management

## INTRODUCTION

As from The Ninth National Economic and Social Development Plan (2002-2006), the philosophy of sufficiency economy bestowed by King Bhumibol Adulyadej has been adopted as the guideline for national development and management.

“...Development of the nation must be carried out in stages, starting with the laying of the foundation by ensuring the majority of the people with their basic necessities through the use of economical means and equipment in accordance with theoretical principles. Once reasonably firm foundation has been laid and in effect, higher levels of economic growth and development should next be promoted.” His Majesty King Bhumibol Adulyadej’s Royal Speech given on December 20, 1973.

The sufficiency economy, which is based on adherence to “the Middle Path” principle, has been implemented in many different sectors in environmental, social and culture, economics development and including tourism, aiming to achieve sustainable development. Tourism is one of the key sectors and a major source of national income and also it plays an important part in business growth and strong community building. Tourism-related agents and local administrations therefore have various kinds of activities organized to promote community-based tourism, by having culture and environment integration and income distribution to the local communities as the main objectives.

Creative tourism is recognized as a tool for economic, social, culture and environmental development by emphasizing on to benefit both tourists and the community/host. This new tourism concept is one form of alternative tourism, developed from community-based tourism concept which is based on Sustainable Tourism (Suttipisan, 2013, pp.47-55). Creative tourism was described as “tourism which offers visitors the opportunities to develop their creative potential through active participation in courses and learning experiences which are characteristic of the holiday destination where they are undertaken”. (Richards and Raymond , 2000)

The villages of lower Mae Wang watershed, Mae Win Sub-district, Mae Wang District, Chiang Mai Province, Thailand, including 1 Karen tribe village (Mae Sapok), and 4 Thai villages (Mae Moot, Sob Win, Huey Pong and Wang Pa Poon), was therefore chosen for the research as the area had many potentials for community-based tourism and resources that could be an advantage for creative tourism. This research was aimed for sustainable creative tourism potential enhancement under the sufficiency economy principles, aiming to benefit tourists and the local community, with the main objectives of 1) to study potentials of the local community for creative tourism management in the village area of lower Mae Wang watershed; 2) To build practical guidelines for creative tourism management under the sufficiency economy principles.

## LITERATURE REVIEW

Tourism has major impacts on environmental and cultural resources. If it is not managed well, it can destroy nature and society (UNESCO, 2009). Sustainable tourism allows the use of natural and cultural resources for gaining economic profit while at the same time guaranteeing that these resources are not deteriorated or destroyed (UNESCO, 2009, p.9). It is important that creative tourism must fulfill the needs of creative tourists, who are ea-

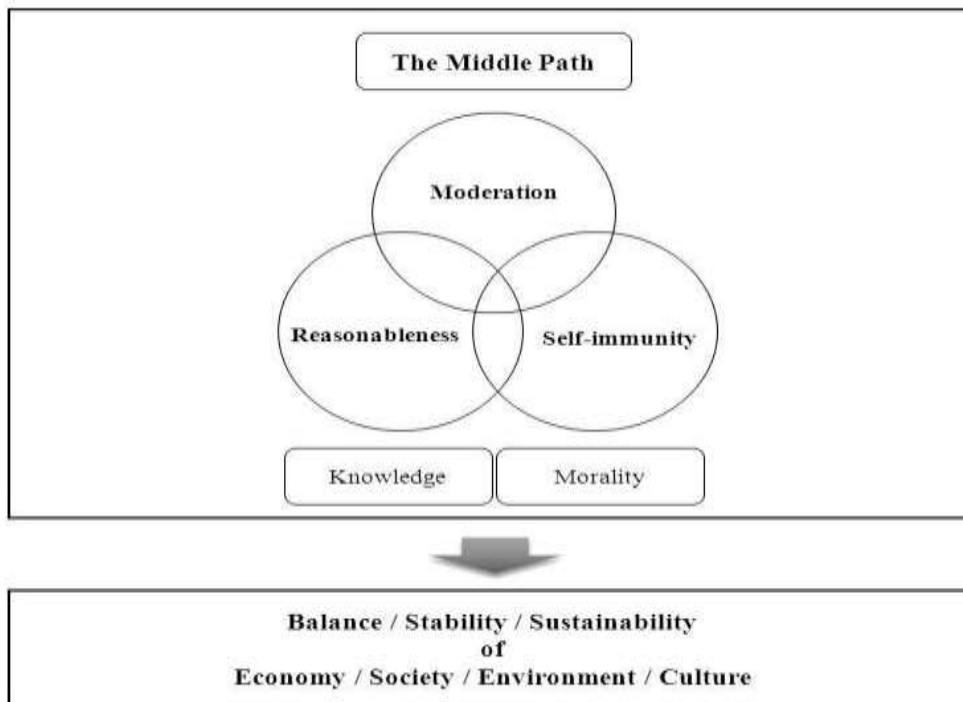


ger to learn and experience the culture of the countries or destinations they visit. These creative travelers are ready to participate in learning activities, and happy to learn by doing to unleash their own creativity. Creative tourism experiences can be offered to the tourists in many forms such as by learning activities, workshops, food tasting (authentic local food tasting), doing (in cooking classes), seeing (plantation tours), etc. These tourism activities can be organized in communities that have tourism location potential (a place that can arrange learning activities) and human resource potential (community members who can share experience and knowledge to the visitors). Community-based tourism emphasizes on maintaining sustainable environment, social and culture with the concept that the planning process is done by the community members for the community. The community will play an important role by not only being an owner of the resources but also taking part in decision making and managing to provide knowledge to the visitors (Potjana Suansri, 2003). In the same direction, Worapong Phukpoo (2019) concluded the community-based tourism (CBT) philosophy as the following 1. CBT potential is based on the local cultural ecology, 2. CBT aims for local resource conservation and to make optimal use of the resources, 3. community members take part in planning, managing and decision making, 4. CBT management needs to be flexible and based on community context and situations, 5. fair income distribution both directly and indirectly is ensured, 6. CBT focuses on knowledge exchange, 7. CBT is an important instrument for development.

In Thailand, the GSTC (Global Sustainable Tourism Council, 2020) Destination Criteria (GSTC-D) is well followed as a guideline in sustainable tourism development, especially tourism in the community. GSTC-D includes 4 dimensions: 1. Sustainable management 2. Socio-economic sustainability (delivering local economic benefits, social wellbeing and reducing negative impacts) 3. Cultural sustainability (protecting cultural heritage and reducing negative impacts) 4. Environmental sustainability. Moreover, the community can also apply the sufficiency economy principles, which is one of the national policies, to build sustainable tourism considering that the sufficiency economy principles contributes to sustainability in every aspect. Sustainable tourism is defined as tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities (UNWTO, 2005).

Sufficiency economy is a philosophy that is applied in sustainable tourism in both community scale and national scale as it aims at more balanced well-being, sustainable stability, adapting ability by following the middle path principle. (Indaratna, 2007; Indaratna, 2013; Choosit Choochart and team, 2017) Sufficiency economy opposes consumerism and the principle encourages all sectors to commit to fairness and morality in any conduct for better society and local economy and to reduce natural and cultural resource degradation, which causes imbalance and unsustainable development. Sufficiency means moderation, reasonableness, and self-immunity to protect oneself from internal and external shocks. Another two conditions are needed to make the principles of sufficiency economy effective: knowledge and morality. Without morality in any conduct might cause damage to the society, and without knowledge, people cannot achieve their goals properly. (UNDP, 2007; NDP Steering Committee and Secretariat, 2013 ; Buranapin & Rattawatankul, 2015) With the sufficiency concept or the middle path principle, it will make people live a more balanced life, be economical and minimize resource consumption for their own benefits and that could result in environmental deterioration. (Wanasilp & Tangvitoontham, 2015)

**FIGURE 1:** The Philosophy of Sufficiency Economy in a Nutshell



*Source:* Office of the National Economic and Social Development Board. (2007)

From figure 1 the Philosophy of Sufficiency Economy in a Nutshell, which indicates principles and purposes of sufficiency economy, shows that the sufficiency economy aims to build balance, stability and sustainability of economy, society, environment and culture.

Besides the value of natural and cultural resource and good management within communities, the human resource is one of the most important elements in a service sector or tourism, which human are very involve with the development and delivery of services or vacation experiences (Baum, 2006). So the management and development of employees in tourism industry or enterprise is a significant operation (Baum, 2006). Tourism is a service industry which means that it depends strongly on human resources at all levels and from many different service sectors include all workers in the tourism industry (UNESCO, 2009). The residents is a main part in local resource management based on sufficiency economy in the self-immunity aspect by being engaged and developing the sense of being an owner of the local resources. Sufficiency economy is a key to sustainable development by empowering the community and building strong social structure, along with human resource development which is a focus of sufficiency economy and essential for all levels of development.

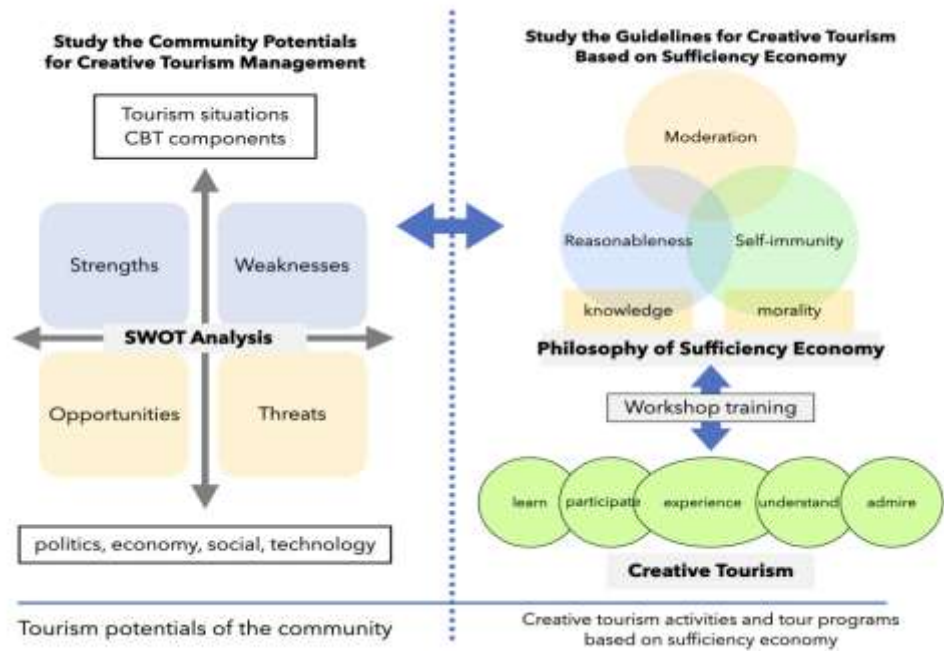
It is necessary for the community to engage and help improve tourism management to fit with the current trend, and at the same time the traditional local way of life should be well conserved. (Naipinit & Maneenetr, 2010) From the study "A Strategic Planning for Community-based Tourism Development on Tai Lue Culture at Luang Nuea Community, Luang Nuea Sub-district, Doi Saket District, Chiang Mai Province" by Worapong Phukpoo

and team (2018), in which the internal and external environment of community-based tourism were analyzed with SWOT Analysis to formulate a strategy for developing the community-based tourism, based on Tai Lue culture, the result showed that the strategy's positioning for developing the community-based tourism based on Tai Lue culture is an aggressive strategy, which consists of 3 strategic issues: 1. the strategy for promoting community-based tourism to be well-known, 2. the strategy for developing the management potential of community-based tourism and service quality enhancement, and 3. the strategy for creating the proud and good moral traits of Tai Lue cultural heritage for sustainable succession.

Salazar (2012) added any community-based tourism program wishing to achieve sustainable success needs local tour guides who are well trained. Professional training is needed to improve guiding and hospitality skills, and also to make guides aware of complex ethical dilemmas, such as the disjuncture between local conceptions of community and the expectation of the communities toward visiting tourists (Salazar, 2012). “Training may not be enough to tackle all problems, but it certainly helps tour guides to take better-informed principled decisions about guiding tourists” (Salazar, 2012, p.19).

Thus, to study the community's tourism potentials, tourism-related situations, and community-based tourism elements as well as to organize workshop training to establish a guideline for potential enhancement of sustainable creative tourism under sufficiency economy principles, the engagement of the local community is very necessary. The people need to take part in planning and obtain necessary knowledge so that they can bring the guidelines into practice in tourism resource management in their own community and that will lead to sustainable development.

FIGURE 2: Conceptual Framework



## RESEARCH METHODOLOGY

The research processes of this study are conducted by using participatory methodologies that focus on qualitative approaches by focus group discussion and brainstorming sessions with the community representatives. The questionnaires is used also in order to achieve the objectives of the research.

### The sample sites

The five villages (Mae Sapok, Mae Moot, Sob Win, Huey Pong and Mai Wangpagoon) in Mae Win Sub-district, Mae Wang District, Chiang Mai Province, Thailand are selected as the sample site of the study. They are located in the area of lower Mae Wang watershed. This area is hilly slopes and surrounded by mountains. It has the rich of natural resources such as many waterfalls, the national forest, and agricultural landscape. These villages has the attractive cultural characteristic of Karen hill tribe.

### The sample groups

The sample group in this research, selected with purposive sampling method were 50 participants who were the local people and tourism stakeholders in the lower Mae Wang watershed area. They were volunteering to be a part of the research. The sample groups consisted of

1. 5 community leaders from the lower Mae Wang watershed
2. 25 residents from the lower Mae Wang watershed area
3. 18 Hub Maewin members (The tourism group of Maewin)
4. 2 Government agents from local tourism management section, Mae Win Sub-district Administrative Organization

## DATA COLLECTION

**TABLE 1.** Research Method for this study

| Objectives                                                                                                                    | Research tools                           | Research Methods                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. To study potentials of the local community for creative tourism management in the village area of lower Mae Wang watershed | Focus group discussion and brainstorming | Focus group discussion and brainstorming for SWOT analysis in tourism potentialities in the area of lower Mae Wang watershed: Internal factors that are strengths and weaknesses considered such natural and cultural resources, local participation and tourism management. External factors that could affect tourism development in this area such as government policies, politics, economy, society, technology, etc. |

**TABLE 1.** (Continoues)

| <b>Objectives</b>                                                                                                              | <b>Research tools</b>                       | <b>Research Methods</b>                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. To build the Guide-lines for Potential Enhancement of Sustainable Creative Tourism under the Sufficiency economy principles | 1. Questionnaires                           | The survey of local satisfaction on the workshop training for the creative tourism development under sufficiency economy principles is conducted through the questionnaires, with rating scale of 1-5 that are 4.21-5.00 very satisfied, 3.41-4.20 satisfied, 2.61-3.40 moderately satisfied, 1.81-2.60 slightly satisfied, and 1.00-1.80 least satisfied.                                       |
|                                                                                                                                | 2. Focus group discussion and brainstorming | 1. Focus group discussion for considering applying the sufficiency economy principles for the creative tourism development in 4 aspects: cultural heritage, art, way of life and media for tourism promotion<br>2.Focus group discussion and brainstorming in order to create the guide-lines for potential enhancement of sustainable creative tourism under the sufficiency economy principles |

## RESULTS

From the focus group discussion, to explore the potentials of the local community in managing creative tourism of the 5 village area of lower Mae Wang watershed, it revealed the area's tourism potentials were as following

1. The area/location aspect. It was shown that there were a variety of tourism sites both nature and cultural sites, which could be developed and offered many tourism experiences to the visitors. Its nature tourism sites in the area included waterfalls, Mae Wang river, green forest; its cultural tourism sites were the villages where tourists could experience Northern Thai and Karen tribe way of life; its sustainable economy learning spots were such as Kok Nong Na model learning center, organic agriculture & new theory agriculture learning centers; and its local wisdom learning sites where the tourists could learn about traditional medicines, wood handicrafts, traditional liquor brewing. The area also offered many kinds of accommodation. However, the designated area still needed further tourism development and more tourism facilities in order to meet tourist carrying capacity.

2. The management aspect. In the lower Mae Wang watershed area, there was collaborative networking that helped in tourism development in the area, which includes groups of rafting operators, restaurants, homestays, and the Hub Maewin group. However, to have more organized management was still essential.

3. The activity and learning process aspect. The area had been known for its many adventure and nature tourist activities it offered to visitors such as natural trail hiking, rafting, elephant feeding & bathing, jungle walk with elephants, and also it could offer local life-style experiences, local wisdom learning experiences, as well as sufficiency economy learning activities. In the aspect of tourism activities and learning process, however, the area still needed to create more creative tourism activities and creative learning process that were suitable for the type of tourists that came to visit the destination.

4. Engagement aspect. There were occupation networking and more than 7 occupation groups in the lower Mae Wang watershed area and they worked in collaboration with related party agencies from government sector, private sector, and educational institutions.

However, the community planning still did not include some stakeholders. Some villages did not have collaborative group networking for effective tourism management. There was also a lack of good planning for holistic tourism management, and a lack of tourism projects to collaborate with other villages and a lack of center or in charge persons for tourism coordination. Moreover, the people in the community did not have knowledge of tourism management, tourism development, and marketing and foreign language skills, which became a main problem for tourism development. Also in many villages in the area, many people who were hill tribes were illiterate.

From external factor analysis, the result showed the opportunities that helped support tourism development in the lower Mae Wang watershed area were the government's community-based tourism promotion schemes and community development with the sufficiency economy philosophy policies. In addition, tourist behaviors had now changed. They were more interested in learning activities and expected to experience and participate in the local people's way of life when they traveled, which fit with what the area could offer to the

tourists. And with today's communication technology, social media had become a good marketing channel and made tourism promotion easier. However, the Covid-19 pandemic, which had been affecting the whole world in almost all aspects and caused recession especially in the tourism sector as people could not travel, became a threat to tourism in the lower Mae Wang watershed area. Another issue found here was that some tourism businesses were operated by outsiders instead of by the people in the community themselves, so the local people could not get the benefits from tourism as they should. The form of tourism business operated by outsiders could also count as one limitation of community-based tourism development.

The creative tourism management under the sufficiency economy principles emphasizes community potential enhancement as a priority for sustainable tourism. The concept of creative tourism focuses on providing experiences to tourists through learning activities, so the host or the community members need to know how to relay the knowledge to the visitors, while the sufficiency economy principles focuses on human resource as the center of sustainable development, therefore, from the brainstorming sessions among the participants, the conclusion was that the most important thing for creative tourism development in the community was to provide necessary knowledge and related skills to the community members (the host) first, which corresponded with the core concept of sustainable creative tourism development that emphasizes on engagement among the people in the community. Accordingly, a workshop training was organized based on the research plan with 50 participants with these 3 topics were;

1. *English for tourism*. It aimed to improve the language skills of the participants. English was a necessary skill for them to be able to communicate with the tourists as many of the tourists that came here were foreigners and they spent much time together in the tourism activities such as trekking, elephant feeling & bathing, rafting, etc.

2. *Sufficiency economy for tourism and creative tourism management*. The lower Mae Wang watershed community was outstanding for its local way of life and it was also a community of sufficiency economy practice and had been certified for a sufficiency economy model community from the government, so the training topic "sufficiency economy for tourism and creative tourism management" was well suitable with the context of the community. Also, to provide knowledge of the basic concept, meaning, principles and forms of creative tourism to the participants and the people in the community would make them understand better how creative tourism different from other kinds of tourism, so that they could apply that knowledge in creative tourism management in their own community and be able to design creative activities and tour programs themselves in the future.

3. *Personality development, communication skills, customer service psychology*. In this topic, the participants learned skills of how to give information to the visitors in a role of community tour guides and local interpreters and with this training, where the participants had a chance to practice in the training exercise, they could understand better about the roles of a service provider and a host.

Another topic proposed by the community was on-line marketing to promote tourism but only for the ones who were interested and those with the equipment. In this workshop, they learned how to use Facebook to promote tourism, how to make videos for Youtube, basic photography and how to present tourism in their community on social media to attract tourists. After the workshop training was completed, 47 people of those participants

filled out the questionnaires of local satisfaction on workshop training for the sustainable creative tourism development under sufficiency economy principles. The assessment of their satisfaction were divided into 3 parts: part 1, the general information of the respondents, part 2, the level of satisfaction in attending the training, and further recommendations. The table below shows general information of the training participants for the sustainable creative tourism development under sufficiency economy principles.

**TABLE 1.** General information of the training participants for the sustainable creative tourism development under sufficiency economy principles

**Part 1** General information of the respondents

| <b>general information</b>   | <b>Number<br/>( N = 47 )</b> | <b>as a percentage</b> |
|------------------------------|------------------------------|------------------------|
| <b>1. Sex</b>                |                              |                        |
| male                         | 12                           | 25.5                   |
| female                       | 34                           | 72.3                   |
| not specified                | 1                            | 2.1                    |
| <b>2. Age</b>                |                              |                        |
| under 20 years               | 2                            | 4.3                    |
| 21 - 40 years                | 26                           | 55.3                   |
| 41 - 60 years                | 15                           | 31.9                   |
| 60+ years                    | 4                            | 8.5                    |
| <b>3. Career</b>             |                              |                        |
| Company staff                | 1                            | 2.1                    |
| Self-employed                | 10                           | 21.3                   |
| Government officer           | 2                            | 4.3                    |
| Farmer                       | 18                           | 38.3                   |
| Employees                    | 2                            | 4.3                    |
| Other                        | 12                           | 25.5                   |
| not specified                | 2                            | 4.3                    |
| <b>4. Education</b>          |                              |                        |
| under bachelor's degree      | 32                           | 68.1                   |
| Bachelor's degree            | 7                            | 14.9                   |
| Postgraduate                 | 2                            | 4.3                    |
| not specified                | 6                            | 12.8                   |
| <b>5. Income</b>             |                              |                        |
| Less than 10,000 baht/Month. | 33                           | 70.2                   |
| 10,000 - 20,000 baht/month   | 9                            | 19.1                   |
| More than the 20,000/month.  | 1                            | 2.1                    |
| not specified                | 4                            | 8.5                    |

It was found that most of them were female. They are between 21-40 years old (55.3%), followed by 41-60 years of age (31.9 %). Most of them were farmers (38.3%) and self-employed (21.3%). For their education level, most participants graduated at under bachelor's degree (68.1%), bachelor's degree (14.9%), and postgraduate (4.3%), respectively. Their average income is less than 10,000 baht/month (70.2%).



**TABLE 2.** Local satisfaction on workshop training for the sustainable creative tourism development under sufficiency economy principles

| Satisfaction aspects                                                                                                                   | Lowest score | Highest score | AVERAGE     | Standard Deviation (S.D) | Results          |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|-------------|--------------------------|------------------|
| 1. The level of knowledge and understanding about the principle, concept and theory of tourism before the training                     | 2            | 5             | 3.77        | .840                     | satisfied        |
| 2. The level of knowledge and understanding about the principle, concept and theory of tourism after the training                      | 3            | 5             | 4.19        | .537                     | satisfied        |
| 3. The level of skills and experience from activities in the practical parts (brainstorming session, discussion and presentation skill | 3            | 5             | 4.09        | .654                     | satisfied        |
| 4. Ability to apply the knowledge and skills from the training in real situations                                                      | 3            | 5             | 4.11        | .682                     | satisfied        |
| 5. Ability to share knowledge and skills from the training to others                                                                   | 3            | 5             | 4.04        | .729                     | satisfied        |
| 6. The training helps raise awareness for sustainable tourism management                                                               | 3            | 5             | 4.30        | .553                     | Very satisfied   |
| 7. The training encourages networking and helps in building good relationship among people in the community                            | 3            | 5             | 4.31        | .514                     | Very satisfied   |
| 8. The contents and activities in the training are in accordance with the community's requirements                                     | 3            | 5             | 4.38        | .535                     | Very satisfied   |
| <b>Total</b>                                                                                                                           |              |               | <b>4.15</b> |                          | <b>satisfied</b> |

The results of the questionnaires as shown in the table 2 can be concluded that the participants were satisfied with the workshop training at a high level (4.15 satisfied). Their satisfaction with “the contents and activities in the training are in accordance with the community’s requirements” (4.38), “The training encourages networking and helps in building good relationship among people in the community” (4.31) and “The training helps raise awareness for sustainable tourism management” (4.30) was marked at the highest level (Very satisfied), respectively. On the other aspects, the level of the satisfaction was marked at a high level (satisfied).

In the further recommendations, some participants noted that both government and private organizations should contribute to consistently providing the community with knowledge and information. With the skills, knowledge and understanding about tourism obtained from the training, the participants then participated in a brainstorming session to draft guidelines for creative tourism management under sufficiency economy that would be suitable with the community context. The guideline involved application of sufficiency economy in potential enhancement for creative tourism management, which includes 4 aspects: cultural heritage, art, way of life and media for tourism promotion.

**TABLE 3.** The Guidelines for Potential Enhancement of Sustainable Creative Tourism under the Sufficiency economy principles

|                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applying the principle of moderation, reasonableness, self-immunity, knowledge, morality in <u>cultural heritage</u> potential enhancement</b> | <ul style="list-style-type: none"> <li>- to appoint leaders to pass down cultural heritage to the next generations</li> <li>- to take a part in cultural inheritance by maintaining and conserving their traditions, custom, rituals, garment, language and participating in activities to build unity in the community</li> <li>- to develop cultural heritage to be in tune with current society</li> <li>- to set community rules and cultural regulations for visitors to follow in order to limit the external impact</li> </ul>              |
| <b>Applying the principle of moderation, reasonableness, self-immunity, knowledge, morality in <u>art</u> potential enhancement</b>               | <ul style="list-style-type: none"> <li>- to have personnel or organizations consistently working with the community in art development</li> <li>- to gain further knowledge from people in the community or from other medias and apply the knowledge, practice and share that knowledge to others</li> <li>- to involve art into tourism such as presenting food or traditional desserts in festivals or in ceremony</li> <li>- to continue and conserving the community traditional art such as fabric weaving, basketry, sword dance</li> </ul> |
| <b>Applying the principle of moderation, reasonableness, self-immunity, knowledge, morality in <u>way of life</u> potential enhancement</b>       | <ul style="list-style-type: none"> <li>- to conserving the community traditional way of life</li> <li>- to be conscious of moderation, reasonableness, self-immunity by relying on one's self-based on local traditions such as conserving the local's rice and local flora seedlings</li> <li>- to reinforce morals, goodness among the people through training and that could be when the people have community gatherings</li> <li>- to promote sufficiency consciousness at family level and in everyday life</li> </ul>                       |
| <b>Applying the principle of moderation, reasonableness, self-immunity, knowledge, morality in <u>media</u> potential enhancement</b>             | <ul style="list-style-type: none"> <li>- to make communication signs/boards with local materials and by local artisans</li> <li>- to organize training of how to use on-line media to promote the community tourism</li> <li>- to provide important information such as the community's history, tradition, culture, community key people in the media</li> <li>- to support personnel training or organization consistently working with the community in the development</li> </ul>                                                              |

## DISCUSSIONS

The principle of sufficiency economy (moderation, reasonableness, self-immunity, knowledge, morality) was employed to establish the guidelines for potential enhancement of creative tourism management by having a main focus on human resource potentials in 4 aspects: cultural heritage, art, way of life and media for tourism promotion and it was concluded that sustainable creative tourism under the sufficiency economy principles had 5 major elements which are

1. To use local resources, both natural and cultural resources to create tourism products with the engagement of the people, and it must be carried out under the rules and regulations of the community in making optimal use of the resources to achieve sustainable development.
2. To add value to tourism products by organizing training sessions for sustainable creative tourism product development based on sufficiency economy principles, so that the people in the community themselves can create tourism programs and services based on their own area potentials and tourist behaviors
3. To make tourism products different and stand out from others' by presenting the lower Mae Wang watershed community's uniqueness: its local way of life, local wisdom, beautiful nature and traditional medicines, in tourism product development
4. To use innovation to develop more creative tourism products from local wisdom such as to create new products from agriculture products, from local herbs, from woven fabric including to design interesting packaging for these products
5. To distribute economic benefits to the community fairly by letting everybody in the community engage in tourism management, and also the income and benefit distribution must be transparent.

From the field research conducted in the Mae Wang watershed area, Mae Wang district, Chiang Mai province to study the community's potentials for creative tourism, the potentials of the area were analyzed by SWOT Analysis in 4 aspects: 1. area/location 2. management 3. activity and learning process 4. engagement (Sinth Sarobol and team, 2003: 26-28) for further development of sustainable creative tourism under sustainable economy principle in the Mae Wang watershed area. This agreed with Worapong Phukpoo (2018) that the analysis of the community's potential would contribute in a strategic planning for community-based tourism development in order to create a cultural learning process for the visitors and that would lead to sustainable local wisdom and culture conservation and succession. Raymond and Richards (2000) and Designated Areas for Sustainable Tourism Administration (DASTA) (2018) mentioned about creative tourism that it's a form of tourism that let the visitors and the locals (host) learn together through participating activities, and by experiencing the local way of life, culture and local wisdom, while the Department of Tourism (2018) and Binkhorst (2006) noted that creative tourism was a means to add value to history, culture, local way of life and the identity of the place, and it did not focus on income generating but on the value of the community.

According to the feedbacks of workshop training for the sustainable creative tourism development under sufficiency economy principles, the participants agreed that this way was useful for local people in their tourism resources management and community tourism development. The tourism knowledge and skills development in this training could bring it into true practices and that would lead to sustainable development in the future. They should be shared to other people and to other communities. In part of further recommendations, many participants stated that both government and private organizations should contribute to consistently supporting the community with knowledge and information.

Furthermore, the researchers organized a brainstorming session with the community of lower Mae Wang watershed to set up tour programs based on sufficiency economy principles for resource and cultural asset management and development. The process included prioritizing the economic income sources for risk management and to reduce outside business dependence. The tour program were designed with the purpose to let the tourists be in nature, experience the local way of life and learn about cultural tourism, through seeing, smelling, hearing, touching, tasting and then try by doing it themselves, which was the main idea of creative tourism. The community could hold many learning activities themselves for the tourists such as learning Kok Nong NA model ( Practice the agricultural activity) in the village chief's land, "Karen" textile weaving and cooking at the Doi Farmstay and herbal massage at Hub of Maewin club, etc.

The tourists can have fun and good learning experiences in the creative tour program whereas the local people in these communities can gain from the tour program and those tourists. UNWTO (2005) stated that sustainable tourism management should maintain a high level of tourist satisfaction and benefit the host by focusing on natural resource management and maintaining balance of the ecosystem as well as culture and local way of life. The guidelines for potential enhancement of sustainable creative tourism under the sufficiency economy principles in the lower Mae Wang watershed area has a main focus on building knowledge and understanding of the local people in community tourism resources and management, so that they can identify the challenges and be aware of their value, which will lead to value added and to achievement in sustainable development through creative tourism activities.

## **CONCLUSION AND SUGGESTIONS**

The sufficiency economy principles is also a means for natural resource, culture and the local way of life conservation, and for helping the people to make extra income as well as raising awareness, pride, and unity of the people. The guidelines for potential enhancement of sustainable creative tourism under the sufficiency economy principles in the lower Mae Wang watershed area has a main focus on building tourism knowledge, understanding and skill of the local people in local resource and cultural asset management, so that they can identify the challenges and be aware of their own value. It will lead to value added and to achievement in sustainable development in natural resource, agriculture, way of life, culture and local wisdom aspects, with the full engagement of the community and the tourism stakeholders. The guideline should be brought into practices through some pilot projects such the creative tourism development, the local culture promotion and also create more tourism development network. The consistent supports: financial, knowledge, facility, personnel from related government organizations are much necessary. The communi-

ties and related agencies fully could engage in their tourism resources, which will most benefit the community and lead to sustainable tourism development.

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# **ALL-OUT EFFORT FOR POSITIVE GROWTH AMIDST COVID-19 PANDEMIC: VIETNAM'S SUCCESS STORY**

by

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## **ABSTRACT**

Covid-19 pandemic has changed the world in every aspect. It is a new factor that disrupts the world order. What we must do now is to plan for post-pandemic recovery. Post-crisis recovery consists of several challenges, which can absorb plenty of resources from every country throughout the globe, Vietnam will not be an exception. Vietnam enjoyed growth through the pandemic, while many world powers have been seriously affected, and suffered from negative growth in several consecutive quarters. This paper will investigate the Vietnam policy responses leading to its successful story through qualitative research. It found that Vietnam policies based on good governance and the effective application of digital technology in 4.0 era. However, the current landscape would be both an opportunity and a challenge for Vietnam in the near future, especially as the Covid-19 situation turns extreme in the Indochinese country. In addition to supporting equitable growth, digital technology may also make us more robust in crisis and enable us to control the effects of social disturbance. At the same time, Vietnamese authorities need to use a sustainable strategy for long-term to assist vulnerable and impoverished people expand their means of subsistence during the Covid-19 pandemic.

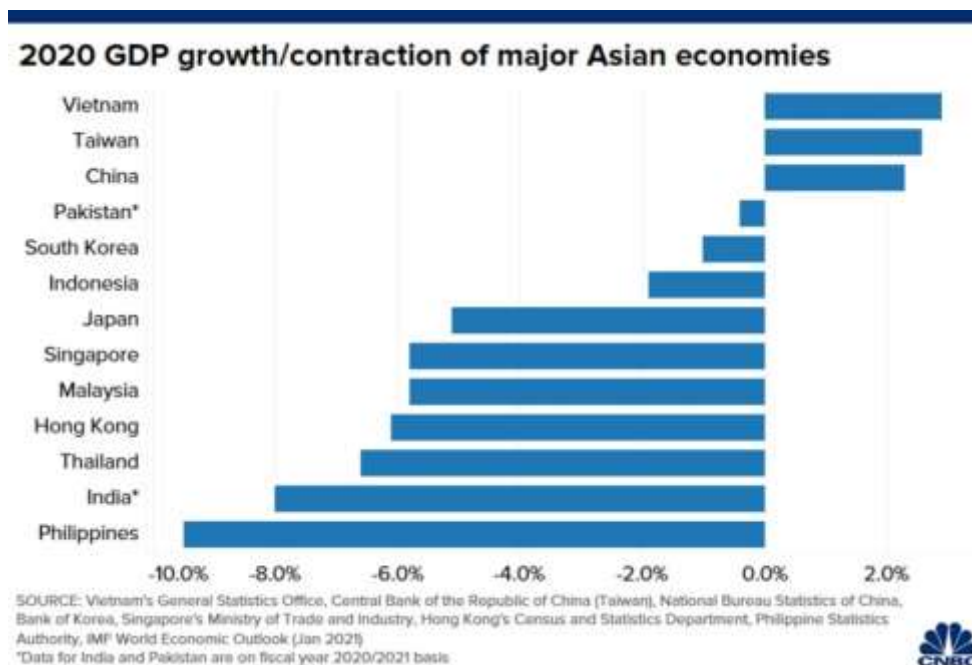
**KEY WORDS:** Vietnam, Vietnamese Government, COVID-19, Good Governance, Digital Technology, Digital Transformation, Positive Growth.



## INTRODUCTION

After an increase in gross domestic product of 7.08 percent in 2018 and 7.02 percent in 2019, the Vietnam economy rose by 2.91 percent in 2020. The manufacturing and processing industry expanded 3.98 percent, while the agriculture industry grew 2.68 percent and the service industry grew 2.34 percent. Exports and investment abroad have been solid. In the first three quarters of 2020, Vietnam's exports to the United State grew by 23 percent over the same period of 2019, with the export of electronics up 26 percent. (The General Statistics Office of Vietnam, 2020). In the midst of the adverse effects of the COVID-19 epidemic, however, Vietnam is seen as a success with the economic growth being among the highest in the world. Bank of America economists Global Research claimed that Vietnam's results are one of the highest growth rates while the rest of the world is still deep in recession and not yet overcome (Lee, 2021)

**FIGURE 1:** GDP growth/contraction in 2020 of 13 countries in Asia



Vietnam rapidly suppressed Covid-19 pandemic with a system of sound government. This has made Vietnam's economy recover much faster than other countries in Southeast Asia in particular and in Asia in general. Vietnam only has 3710 cases of Covid-19 and 35 fatalities by 31 December 2020 (WorldOmers, 2020). The International Monetary Fund (IMF) anticipates a robust Vietnam's economic recovery in 2021, with growth forecasting that this will be strengthened to a 6.5% level (McDonald, 2020).

How country with limited resources can survive and have positive growth amidst covid-19 pandemic? This paper aims to identify and to explore factors leading to Vietnam's success.

## **POSITIVE GROWTH THANKS TO EFFECTIVE ANTI-PANDEMIC STRATEGY**

On March 4, 2020, Prime Minister Nguyen Xuan Phuc issued Directive No. 11/CT-TTg on “Urgent tasks and solutions to remove difficulties for production and business and ensure social security. response to the Covid 19 pandemic”. This is considered a guideline in Vietnam’s strategy to recover the economy during the pandemic. The Vietnamese government strategies covered in this directive include the following key points:

*Firstly*, remove difficulties and facilitate access to capital, finance, taxation, commerce and electronic payment. The highlight of this policy is the government’s support packages, including a credit support package of about VND 250 trillion and a support package of about VND 30 trillion for tax and state budget spending solutions.

*Secondly*, review and cut administrative procedures and costs for businesses such as reducing logistics costs for maritime, aviation, waterway, railway, road ...

*Thirdly*, facilitate production and business, promote import and export by promoting customs clearance of goods in border provinces, distributing shortages to reduce prices of essential products (for example: pork prices...).

*Fourthly*, urgently restore and develop the tourism and aviation industries through programs to stimulate domestic tourism and welcome international tourists from areas not affected by the Covid-19 pandemic.

*Fifthly*, speed up the implementation, disbursement of investment capital and improve the business environment. At the same time, focus on handling labor problems such as supporting workers who are unemployed due to the impact of Covid 19, managing foreign workers working in Vietnam.

*Finally*, promote information and communication with the topics “Safe Living”, “Safe Vietnam”, which affirms that Vietnam is a safe destination and always creates all favorable conditions for tourists and visitors. domestic and international investors.

After the ministries and agencies from central to local levels implemented the above directives of the Prime Minister, Vietnam’s economy has obtained positive results as follows:

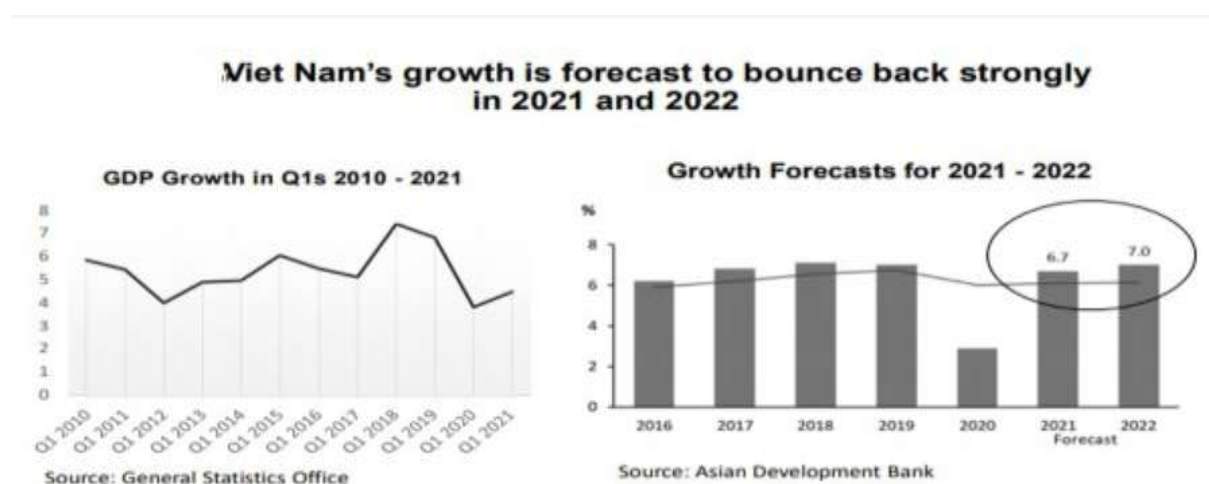
In agriculture, Vietnam has promoted exports, transforming agricultural production structure from rice to other crops and livestock with high economic value. Vietnam’s public investment support level is among the highest in Southeast Asia with 34.5%. This has contributed to offset the slowdown in private investment. Subdued local demand and significant worldwide fuel price declines have greatly helped to mitigate inflation, notwithstanding the unexpected spike in the first quarter of 2020 in prices of pork and catastrophic floods in the third quarter of 2020 (Hung, 2021).

Multilateral and bilateral trade agreements, the integration of the economy into global value chains, and trade diversion have boosted exports. Exports to the United States have grown by 25%, notably of phones, replacements and textiles. Previously, Europe was Vietnam’s second largest export market, after the United States. Currently, this position be-

longs to China. Vietnam's State Bank introduced its rate decreases that encourage local investors to the market (Hung, 2021).

The Indochinese economy is projected to increase and reach 6.7% and 7.0% respectively in 2021 and 2022 with Vietnam's successful containment of the COVID-19 pandemic having led to robust and stable development, through ADO's report. Export-oriented production, greater investment, and expanded commerce will fuel Vietnam's economic growth. The dynamic growth is projected to continue owing to the continued strengthening of business conditions and the involvement of Vietnam in many free trade agreements involving nearly all major nations.

**FIGURE 2: Vietnam's growth in forecast to bounce back strongly in 2011-2022**



Vietnam has made a contribution towards the continued flow of foreign investment into the economy with its successful inclusion in Covid-19 and the new investment law adopted in January 2021, which simplifies corporate requirements. Vietnam is signatories of virtually all industrialized economies in 15 main free trade agreements. In the first quarter of 2021, Vietnam reported surplus trade of USD 2 billion with exports to China rising 24.3% and to the United States by 32.8%. Exports of goods are predicted to grow this year and next by 8.0% (Hung, 2021).

Digital revolution, increasing expenditure on COVID-19 vaccinations, greater corporate spirit and low loan rates have brought a boom in the services industry.

The Government adopted, on 9 April 2020, Resolution 42 on the social security program of 0.2% of GDP, around USD 0.5 billion, for providing cash transfers to people and companies to address the impacts of the COVID-19 pandemic on incomes that could exacerbate the lives of those living below the poverty line. This is especially beneficial to the homes of ethnic minorities in low-income communities and in rural regions, since their income is most sensitive to the pandemic (Hung, 2021).

The above economic policies of the Vietnamese government are the result of the application of Keynesian economic theory and Thaler's behavioral economic theory to overcome shocks such as the Covid-19 pandemic.

According to Thaler, the consumption behavior of people in particular and the whole society in general is expressed in four words: easy, attractive, social and timely. It means that government policy making must be easy to implement, catchy with people and businesses, solve social problems in a timely and appropriate time (Thanh, 2021). This is completely consistent with the demand stimulus policies to support people, individual business households and businesses of the Vietnamese government through support packages of trillions of VND.

According to Keynes, the financial system, credit and circulation of money are the main tools for economic regulation. The state has a very important role to play to encourage all forms of investment, consumption, adjust interest rates, and focus on solving unemployment (Thanh, 2021). The Government of Vietnam has shown very clearly the role of the State in regulating the macro-economy through the specific policies mentioned in Directive 11 of the Prime Minister.

### **EFFECTIVE APPLICATION OF DIGITAL TECHNOLOGY IN 4.0 ERA**

Digital technology is a concept that refers to a series of elements related to electronic resources used by humans to create data quickly, store data easily and process data correctly. Digital transformation is the application of digital technology to all areas of social life. This is a change in usage behavior, habits as well as culture of each individual and organization in society. Digital transformation is considered the key and positive measures that countries apply to overcome the current difficulties during the Covid-19 pandemic (Dharmaraj, 2021a).

Many countries around the world have formed digital transformation strategies very early, including Thailand. Since the 1990s, Thailand has developed e-government policies to facilitate governance, improve public sector performance, and increase business competitiveness, best for people in social activities (Sagarik et al., 2018).

Vietnam's smartphone users include close to 44 million, over 67 million people who use Internet, over 66 million people who use social media and the total number of mobile subscribers is 145 million (Tram, 2021). Vietnam has issued a "national digital transformation program to 2025, with a vision to 2030". The program bears Decision No. 749 and was signed by Prime Minister Nguyen Xuan Phuc in June 2020 (Dharmaraj, 2021c). Vietnam is therefore intended to become one of the 50 world's leading information technology countries by 2025 with the digital economy representing 20% of GDP. These offer an underlying basis for digital transformation in all fields (Tram, 2021).

Tech firms in Vietnam have evolved rapidly and have responded to the world environment successfully. Currently, there are approximately 58,000 firms in the digital technology community in Vietnam. The objective of 100,000 digital companies can be realized by 2030, with the present implementation rate, by 2025 (Dharmaraj, 2021b).

Vietnam's e-commerce industry expanded 18 percent in 2020 to USD 11.8 billion, equivalent to 5.5 percent of total national income from retail and services, according to a study by the Department of E-commerce and Digital Economy at the Ministry of Industry and Trade. Online sales account for 53 percent of the population and online purchasing for 33 percent of customers. Many companies see digital transformation as an essential way to

increase labor productivity and operational efficiency as a basis to their long-term growth (Dharmaraj, 2021a).

A survey by Vietnam revealed that most companies who feel that the reform is important to managing obstacles and capturing market possibilities are effective in sustaining and recovering operations quicker than other companies.

The digital economy of Vietnam is projected to expand to USD 52 billion by 2025, with an annual increase of 29 percent by last year, according to Google's analysis. Vietnam has the largest digital economy in the area, with the gross market value of its web economy representing over 5% of GDP of Vietnam in 2019. The Vietnamese government wants to quickly transition from cash to cashless spending on public services, while improving the legal framework for electronic payments to shape an economy more modern and transparent.

Many Vietnamese have been empowered by information technology to respond quickly and effectively to public health. Health officials frequently distribute alert notices and recalls to take preventive action through electronic information systems such as text messages by phone, the official website of the Ministry of Health and other social media. Digital technology is a crucial to facilitating work from home, learning online and home provision. Digital technology is a method of transforming to the "new normal" (Dione, 2020). In April 2020, the Ministry of Information and Communication and the Ministry of Health developed an official Bluezone - a smartphone application aimed to safeguard the community from COVID-19. At that time, the employment of technology to avoid and combat the pandemic was deemed a breakthrough. This application is a key for the positioning technology of the Bluetooth low energy. Bluezone smartphones can connect from one person to another within 2 meters and there is a close connection between users of this application. This is the greatest technology to track contacts. Vietnam has these codes: F0 stands for a patient who is COVID-19 positive or the host and F1 is the nearest contact of F0 and has the higher risk of having a positive test result in Coronavirus, while the F2, is the person who made a contact and exposed with F1 and has the moderate risk of being COVID-19 positive. With the Bluezone application available, only a few dozen people will need to be separated from COVID-19 when a positive case (F0) is found rather than quarantining thousands of people (Dharmaraj, 2021b).

The third outbreak of Covid-19 in Vietnam was detected around the end of January 2021 - the time of the traditional Tet holiday of Vietnam with the first case in the United Kingdom of the virus strain. Thanks to a lengthy history of donation, beverage and eating with family and relatives, and a break from the house on vacation, this is the perfect period for increasing expenses. In this context, Vietnamese are increasingly turning to e-commerce platforms and Tet preparation digital banking services. In addition to major foreign online shopping applications appearing in Vietnam such as Shopee, Lazada ..., Vietnam also has an application founded by Vietnamese people called Tiki. Tiki was established in 2010 and has quickly become an e-commerce platform trusted by many consumers in Vietnam. In January 2021, Tiki announced that the number of orders received by the application increased by 50% compared to the same period in 2020. Because of the current epidemic leading to Tet, there has probably been a tremendous increase of business in all e-commerce platforms. The Vietnam National Payment Corporation has stated that starting January 28, 2021 there has been a substantial increase in interbank transfers and e-commerce, which have continued to increase following vacations (Quan, 2021).

Many companies in Vietnam have taken advantage of this fact to accelerate digital transformation projects and providing new services to satisfy the new needs of the people. One of the leading electronic wallets in Vietnam called ZaloPay, actively pushed its lifeline service, a new digital method to old people who give children lucky money in the Lunar New Year. These initiatives are getting momentum and could enable firms to increase their consumer base, particularly in the case of seniors, while addressing safety and health issues.

The expansion of Vietnam's e-commerce and digital finance were increased in Covid-19 pandemic due to its detrimental impact on health, society and the economy, and is creating the opportunity for Vietnam's digital development. In 2020, e-commerce traffic was 150% more than in 2019, with over 3.5 million visits per day on many different platforms. Vietnam has become one of the top three Southeast Asian nations for the development of e-commerce (Quan, 2021).

## **OPPORTUNITIES AND CHALLENGES**

The effective management of Covid-19 in Vietnam has seen it develop favorably, but a lot of obstacles are ahead of its economic progress. At the end of April 2020, Vietnam began to reopen its economy and concentrated on recovery process. This is a breakthrough moment for Vietnam, and Vietnam should seize the opportunities it presents. Vietnam's push for Industry 4.0 has attracted investments of foreign enterprises such as Samsung, Panasonic, Bosch, Piaggio....

Vietnam was hailed world-wide for controlling Covid-19 pandemic, but on 24 April 2021, the new round of infections puts its economic development to risk, especially as they endanger foreign tourism plans reopened. By 18 June 2021, a total of 12,150 COVID-19 cases were certified by the Ministry of Health of Vietnam. Vietnam has also recorded 61 deaths due to the pandemic. The latest community transmission cases have been reported from the provinces of Bac Giang, Bac Ninh, Ho Chi Minh City, Lang Son, and Ha Tinh. Vietnamese government has published new rules on quarantine, extending obligatory quarantine between 14 and 21 days for everyone entering Vietnam (Jamal, 2021).

In addition, Vietnam economy is not very robust yet, the productivity of many government-owned companies is not high, and private and foreign-invested area development has still not been sustained. Vietnam also has a shortage of highly skilled workers. Moreover, the country's legal framework for digital economy is relatively nascent.

Vietnam must also tackle its infrastructural deficiencies. The World Bank observes that physical investment in capital of Vietnam was one of the lowest in Asean as a proportion of GDP. That will impair the ability of Vietnam to offer new facilities for its upcoming economic period (Noi, 2021).

## **RECOMMENDATIONS**

*Firstly*, in the digital transformation agenda, the Government of Vietnam is dedicated. Vietnam has been extremely noteworthy in its attempts to establish several e-government systems and in its continuous efforts to expand systems throughout the pandemic. Vietnam

needs to find ways to exploit more of the potential of digital payment technology in the future, so that the application of digital technology takes place not only in big provinces and cities but also in rural areas, villages and remote areas. In order to do that, the government needs to have a plan to train staff in using technology to directly do work related to administrative procedures, banking, payment....; there are propaganda programs for people to understand the advantages of converting normal habits to habits of using digital technology; infrastructure investment for digital transformation; providing tools for people in remote areas, areas with many difficulties such as equipping smartphones, opening free online payment bank accounts; have a clear and reasonable step-by-step implementation schedule.

*Secondly*, Growth in Vietnam' technology sector requires a broader skilled workforce, and advanced connectivity infrastructure. The Vietnamese government should invest more in education, especially vocational training institutions, to be able to train highly qualified human resources to meet the needs of the current context. Specifically, the government can set up more training centers on information technology; integrating digital technology teaching in all educational levels of the Vietnamese education system; encouraging the younger generation to participate in competitions on technological innovation, application of science and technology and new initiatives on digital transformation in the context of 4.0. In addition, the government can also set up a fund for "Vietnamese talents and creativity" to support individuals and organizations with breakthrough initiatives that contribute to the growth of the technology sector in Vietnam.

*Thirdly*, the development of digital technology always comes with risks, especially data privacy, and cyber security threats. This should be addressed by the government. Furthermore, government investments should to be consistent, with clear goals accompanied by regulatory and legal framework to set the rules for how data should be operated and managed in the digital space. The government needs to form cybersecurity teams with information technology experts to regularly update and patch software on electronic devices, and build increasingly advanced security systems. In addition, it is necessary to propagate and warn people about the use of personal information when performing online transactions, providing examples of how scammers often apply to people to improve their privacy and high alert. Vietnam's legal framework on fields in the digital space is still limited, few in number and weak in effectiveness. The government needs to invest more in building a legal corridor to help protect users.

*In addition*, the primary risk for growth could arise from the COVID-19 pandemic at any time. The latest outbreaks show that immunization programs in Vietnam will need additional time to control the pandemic. In the coming time, the government needs to urgently implement programs to test domestically produced vaccines and speed up negotiations to buy vaccines from suppliers around the world. Vietnam's weakness is its limited financial capacity. Therefore, it is possible to empower businesses to be autonomous in paying the cost of vaccines for their units, to join hands with the government in vaccination against Covid 19. Moreover, the influence of the disaster on people's life remains important. By reducing the effect of the pandemic on deficiency and revenues Vietnam needs to sustain inclusive growth. In other words, Vietnamese officials should develop a sustainable long-term plan to help the vulnerable people and the people who have no income to vary their life through actions, example vocational education and better access to financing for new enterprises; there are programs to support the poor with initial capital for household economic development through cash or crops and livestock....

*Finally*, establishing a large-scale evaluation and control system for existing and future recipients of social assistance would be beneficial for people in demand. The government needs to identify the right people who need to receive social allowances to ensure that they support the right people and the right jobs, to avoid a part taking advantage of this for personal gain. At the same time, it is necessary to have large-scale surveys in each locality to determine which subjects will become high-risk subjects falling into risk situations in order to take timely intervention measures. This evaluation and control system of the government needs to be unified from central to local, working openly, transparently, clearly and consistently.

## CONCLUSION AND DISCUSSION

COVID-19 is an extensive exam with a number of levels and also demonstrates its duality at every stage. Vietnam illustrates at national level that its digital transformation has benefited. In addition to helping Vietnam sustain good economic growth, the application of science and technology in the 4.0 era also offers numerous chances for the improvement of the management system in times of crisis. It is a known truth that digital technology helps us retain our connection in diverse spaces and backgrounds when the link between individuals and outside people is broken by social dissociation measures to guarantee safety during the Covid pandemic. This is an outstanding and beneficial impact (Dione, 2020).

Internationally, Vietnam's management of Covid-19 pandemic was praised as an example for other developing countries to follow and facilitated Vietnam's economy continue to expand during the year 2020 (Lee, 2021). According to Thuy and Djalante (2020), the Vietnamese government has established a framework to combat the spread of this disease called "a fight against an enemy" with the following 8 activities: Participatory governance, transparent governance, agile and responsive decision, proceeding with rule of law, gaining consensus, driving equitable and inclusive, being effective, having responsibility and accountability. The success of Vietnam is proof that Vietnam has a good governance system.

In addition, the behavior and habit of using digital technology of Vietnamese people is also a positive factor affecting the economic development of Vietnam that the government needs to pay attention to. A part of Vietnam's youth has actively participated in gaming platforms on social networks. This also contributes to increased revenue for the companies that make these apps. It is important that we take appropriate management measures to limit the negative effects of gaming in the virtual world on real life.

The manufacturing industry in Vietnam has been generally recognized for the output of the economy in 2020, with production increasing in response to sustained export demand. In the years to come, this is a trend. Towards the end of 2020 Vietnam's service industry was affected hard by pandemic. How soon Vietnam's economy will return to its pre-pandemic course depends on the degree of the rebound in services, notably tourism (Lee, 2021).



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# IMPOSING CIVIL FORFEITURE AS AN ALTERNATIVE TECHNIQUE TO TACKLE ORGANISED CRIME IN THAILAND

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## ABSTRACT

It could not be denied that wealth is the most compelling goal of all organised crime groups. Thus, law enforcement officers are now focusing on an action against property (*in rem*) rather than an action against the individual (*in personam*). In this regard, civil forfeiture measures are recognised by many countries, including Thailand, as an effective measure to tackle organised crime groups. Nonetheless, the nature of the civil forfeiture measures has both advantage and disadvantage, which must be taken into the consideration before it should be imposed. Therefore, this article aims to conduct a critical analysis on the civil forfeiture measures by analysing problems regarding the use of the civil forfeiture measures in Thailand and examining current Thai laws regarding the issue. Lastly, it would propose an appropriate measure, which could balance the protection of individual's rights and at the same time, allow the state to tackle organised crime.

**KEY WORDS:** Tourism Destination Management, Sufficiency economy, Sustainable Tourism Management

## INTRODUCTION

Wealth is considered the most compelling goal of all organised crime groups. All of them run their illegal businesses for only one thing: “profit”. With many limitations in traditional criminal proceedings against organised crime groups, therefore, many developed countries decided on a change of strategy to combat them. Law enforcement officers are now focusing on an action against property (in rem) rather than an action against the individual (in personam). As the result of the confiscation in rem concept, civil forfeiture measures are recognised by many countries of the world as an effective measure to combat organised crime groups (Council of Europe, 2013).

In fact, the confiscation of property is not a new measure in criminal proceedings. On the contrary, it is one of the basic punishments in criminal proceedings, along with others such as imprisonment, confinement or fine. Generally, in criminal cases, the court has the power to confiscate property used or possessed for use in the commission of an offence by a person, or property acquired by a person through the commission of an offence. However, criminal forfeiture still has its limitations because it is still considered as an in personam action against the accused, not an in rem action against properties involved in the offence. Thus, the court could not traditionally confiscate an accused’s property without a conviction. Besides, criminal forfeiture measures cannot confiscate the property of third parties because third parties are not considered as participants in criminal cases. Any property which belongs to third parties cannot be confiscated in criminal procedures. In the case where the court issues an order to confiscate property which is then found to be in the possession of third parties, to contest that order, the third parties only need to show the court proof of ownership of that property at the time crime was committed or proof that he/she obtained it later as a bona fide buyer for value (Cassella, 2019).

In cases of organised crime, because of the in personam concept in criminal proceedings, it is difficult for law enforcement officials to confiscate the accused’s property because the accused has an advantage due to the intimate conviction (the proof beyond reasonable doubt) concept which is used as the standard of proof in criminal proceedings. This means the court can confiscate the accused’s property only when the accused is found guilty. Furthermore, resourceful organised criminals will know how to transfer their property to third parties to avoid the criminal forfeiture measure.

## INTRODUCTION

As from The Ninth National Economic and Social Development Plan (2002-2006), the philosophy of sufficiency economy bestowed by King Bhumibol Adulyadej has been adopted as the guideline for national development and management.

“...Development of the nation must be carried out in stages, starting with the laying of the foundation by ensuring the majority of the people with their basic necessities through the use of economical means and equipment in accordance with theoretical principles. Once reasonably firm foundation has been laid and in effect, higher levels of economic growth and development should next be promoted.” His Majesty King Bhumibol Adulyadej’s Royal Speech given on December 20, 1973.

## THE ADVANTAGES OF CIVIL FORFEITURE MEASURES

In light of the limitations of the criminal forfeiture measures, civil assets forfeiture measures have been created as an alternative legal instrument to attack the financial structure which is considered the most important structure of all criminal organisations. Logically, this measure can be used as a legal instrument to discourage criminal conduct because it obviates the criminal intention to do unlawful business for assets (Attorney General’s office, 2012). Moreover, the forfeited property will be returned to the state and will provide funds for the state to use in combating criminal organisations. In the case of large scale fraud, the forfeited property can be used to compensate victims (Council of Europe, 2013). Generally, civil forfeiture measures have more advantages than criminal forfeiture measures and they can be divided into four main topics as follows:

First, civil forfeiture measures require a lower standard of proof. As a civil forfeiture measure is designed to proceed against property (in rem) rather than against an individual (in personam), thus the procedure will be civil litigation and will use the civil standard of proof (the balance of probabilities). With the advantage of the civil standard of proof, the prosecutor only needs to justify the confiscation of the property on the balance of probabilities (preponderance) standard. Hence, it should be more convenient for law enforcement officials to use the civil forfeiture measure to confiscate the property of organised crime groups rather than using the criminal forfeiture measure, which requires intimate conviction (the proof beyond reasonable doubt) as the standard of proof (Council of Europe, 2013).

Second, civil forfeiture measures do not require a criminal conviction. Unlike criminal forfeiture measures, which require a conviction to proceed to the confiscation of accused’s property, the civil forfeiture measure is a separate civil proceeding against property, which can proceed without a conviction in a criminal case. This measure is also used effectively in a case where the state wants to confiscate the property of fugitives, of an accused who has died and includes the situation where property was involved in a crime but the state cannot prove who the wrongdoer was (Cassella, 2019).

Third, civil forfeiture measures are not limited to the property involved in the particular offence. Because a criminal forfeiture measure is a part of criminal proceedings, it is limited only to the property involved in the particular offence for which the accused was con-

victed. On the other hand, a civil forfeiture measure is a separate civil proceeding against the property, thus it can be used to confiscate any property which was derived from either a specific offence or from a course of conduct. For instance, in a narcotic drug trafficking case, the use of the criminal forfeiture measure will be limited only to the property which is specified in the indictment, but the use of a civil forfeiture measure can help law enforcement officials to reach all the property of a drug dealer who was involved in illegal business (Cassella, 2019).

Fourth, civil forfeiture measures are able to reach the property of third parties. In criminal cases, third parties are not considered as participants, therefore any property of third parties is not subject to the criminal forfeiture measure. The use of civil forfeiture measures can solve this problem because the state can confiscate all property of third parties who are suspected of being involved in illegal activities. The third party needs to prove that the property was not involved in illegal activities, otherwise the court is allowed to confiscate such property.

In practice, civil forfeiture measures had proven its effective in many countries, for example, in Canada the civil forfeiture laws have led to the recovery, as of 2011, of some C\$80 million. Meanwhile, in Italy, in 2010, the authority had freeze assets estimated to be worth at least € 700 million in a single case using civil forfeiture measure. While, in the Philippines, they have benefited from the civil forfeiture powers of Switzerland, which was stolen by Ferdinand Marcos, the former president of the country, and have received an estimated \$2 billion of the \$5 billion (some estimates that it worth around \$10 billion) (Council of Europe, 2013).

With the many advantages of the civil forfeiture measure, it is widely recognised as one of the most significant tools to combat organised crime at international and national levels (Cassella, 2019). At the international level, the civil forfeiture is recognised in many international conventions of the United Nations as an important legal instrument to combat complex crimes, through the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (the Vienna Convention), the International Convention for the Suppression of the Financing of Terrorism (the Terrorist Financing Convention), the United Nations Convention Against Corruption (UNCAC) and the United Nations Convention against Transnational Organized Crime (the Palermo Convention or UNTOC). These conventions obligate member states to enact the civil forfeiture measure and anti-money laundering measures into their domestic laws (Samuel, 2007).

## **THE DISADVANTAGES OF CIVIL FORFEITURE MEASURES**

Although the use of civil forfeiture measures to combat organised crime has many advantages, it still has some problems that should not be overlooked.

First, the use of civil forfeiture cannot annihilate the human resources of organised crime groups. Because this measure is a separate civil proceeding against property (in rem), thus it cannot be used to incriminate members of the organised crime groups in criminal cases. If the ordinary investigative techniques in criminal proceedings cannot obtain sufficient evidence to establish guilt to the level of intimate conviction in criminal cases, they just lose some of their proceeds and return to operate their illegal businesses again.

Second, the use of civil forfeiture measures cannot recover significant proceeds from organised crime groups. Although the use of civil forfeiture measures can recover significant proceeds from organised crime groups in practice, these proceeds do not compare to the total proceeds from their illegal activities. For example, in 2014-2015, law enforcement agencies in the UK collected 155 million GBP from consistent confiscation orders. It was impressive data when we look only at the amount of assets. However, the cost of administration in this process was estimated to be more than 100 million GBP. Hence, it meant that, in 2014-2015, the UK government only benefited by around 50 million GBP from illegal activities. It is a very small amount of criminal profits when compared to the estimated 24 billion GBP per year of proceeds from illegal activities of organised crimes in the UK (Home Office, 2013).

Third, the use of civil forfeiture measures may interfere with the right to ownership of property of an innocent party. Although the right to property is recognised as one of the fundamental rights in democratic countries, it is not an absolute right and can be qualified for reasons such as national security, public safety or the prevention of disorder and crime. Nevertheless, in some cases, the use of civil forfeiture measures may still interfere with the right to ownership of property of an innocent. For instance, 'Mr. A' owns a used car business and he buys a car from a customer. Subsequently, law enforcement officials come to him with a freeze order and inform him that this car was involved in a crime and must be seized pending a court enquiry. In this case, although Mr. A has the right to display any evidence to the court that he is a transferee in good faith and for value of this property, he might lose his opportunity to sell this car in proper time. Moreover, Mr. A might face financial problems if he operates his business by loans because the use of civil forfeiture measures would obstruct the circulation of his financial transactions.

Fourth, the problem of the offshore financial centre or Tax Haven. Although, the use of civil forfeiture measures is widely recognised as an effective legal instrument to attack the financial interests of organised crime groups from many countries, many such groups from all over the world have developed even more complex mechanisms to hide their assets from the hands of law enforcement officials. They attempt to hide their assets not only in their own countries, but also in the more convenient countries which offer advantageous regulation, or opacity, in a discreet jurisdiction. This is known as an offshore financial centre or Tax Haven, "*a country or jurisdiction that provides financial services to non-residents on a scale that is incommensurate with the size and the financing of its domestic economy*", as the destination to hide their assets from the investigations of law enforcement officials. The offshore financial centre may help organised crime groups not only to launder their criminal assets, but also help them to evade tax duties of the countries of origin (Tavares, 2013).

## **THE USE OF CIVIL FORFEITURE MEASURES IN THAILAND**

With the advantages of the civil forfeiture measure, Thailand decided to follow in the footsteps of western countries by enacting the use of civil forfeiture measures into domestic law. In 1999, the Anti-Money Laundering Act B.E. 2542 was legislated by the parliament of Thailand to be a legal instrument used by law enforcement officers to combat complex

crimes<sup>10</sup>. This Act has been modified a number of times. Under this act, law enforcement officers have the power to order civil forfeiture measures on any assets which are believed to be connected with a predicate offence in this Act<sup>11</sup>. In any case, where there is compelling evidence that any asset is connected with a predicate offence in this Act, the case shall be sent to the public prosecutor for consideration and filing a petition to the Court for an order that such asset be vested in the State without delay<sup>12</sup>. The owner of that asset, to avoid this measure, needs to establish verifiable ownership and that the asset is not an asset connected with the offence, or that he/she is a transferee in good faith and for value or has secured its acquisition in good faith and appropriately in the course of good morals or public charity<sup>13</sup>. Nowadays, there are 21 predicate

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## **PROBLEMS OF THE USE OF CIVIL FORFEITURE MEASURES IN THAILAND**

Similar to other countries, the use of civil forfeiture measures can recover significant proceeds from organised crime groups in Thailand too. In 2014, Police Colonel Sihanart Prayoonrat, the Secretary-General of the Anti-Money Laundering Office of Thailand (AMLO), announced the achievements of the use of civil forfeiture measures under the Anti-Money Laundering Act to the public and that the AMLO has collected 9,700 million Baht from confiscation orders since 1999-2014. However, it cannot compare to the estimated amount of 400 billion Baht per year proceeds from illegal activities and organised crime, which is equivalent to 13 percent of Gross Domestic Product (GDP) of Thailand (TCCC, 2015).

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<sup>10</sup> The Anti-Money Laundering Act B.E. 2542 (THA)

<sup>11</sup> The Anti-Money Laundering Act B.E. 2542 (THA) section 48

<sup>12</sup> The Anti-Money Laundering Act B.E. 2542 (THA) section 49

<sup>13</sup> The Anti-Money Laundering Act B.E. 2542 (THA) section 50

<sup>14</sup> The Anti-Money Laundering Act B.E. 2542 (THA) section 3

Further, the civil forfeiture measure can be misused as an instrument to defame innocent people. For example, in 2001, after the conflict between the government of Mr. Thaksin Shinawatra, the former Prime Minister of Thailand from 2001-2006, and opposition politicians, including many journalists, the Anti-Money Laundering Office of Thailand (AMLO) issued an order to the executive officers of 17 Banks asking them to reveal private financial information relating to opposition politicians, journalists and their families to the AMLO. Many plaintiffs complained to the Administrative Court about the legitimacy of this order. Before the judgement of the Administrative Court in 2005, the AMLO withdrew the order from the banks. The Court dismissed the case as the plaintiffs were no longer subject to the AMLO order. The plaintiffs appealed this judgement to the Supreme Administrative Court. Finally, in 2011, the judgement of the Supreme Administrative Court revised the judgment of the Administrative Court, confirmed that the order of the AMLO was inadmissible and forced the AMLO to pay compensation in the amount of 10,000 Baht, plus 7.5 percent of interest a year, to each plaintiff.

Interestingly, the use of civil forfeiture measures in this case was considered a political issue because Police Major General Peerapan Premabhuti, the AMLO Secretary-General at that time, was a close friend of Prime Minister Thaksin Shinawatra. He graduated from the same secondary school (Montfort College) as Mr. Thaksin Shinawatra. He started his career as police officer and became AMLO Secretary-General, considered a civil service role, later. When he worked as AMLO Secretary-General, he was also elevated, as a special honour, to Police Major General by Prime Minister Thaksin Shinawatra. Moreover, after completing his four-year term as the AMLO Secretary-General, in 2006, he was appointed Permanent Secretary of the Prime Minister's Office, which is one of the highest ranks of the civil service in Thailand. Thai media widely criticised this appointment, on the basis that it was a reward for his service in destroying political enemies of the government when he was the AMLO Secretary-General. In 2010, as the result of this case, he was impeached for being an officer who wrongfully exercised his functions in a manner injurious to other persons, by the National Anti-Corruption Commission of Thailand or NACC (Manager Online, 2016). This example is one of the best examples of the potentially negative effects of civil forfeiture on innocent people. Many innocent people had to suffer from the misuse of civil forfeiture measures for over 10 years for political reasons. They were labelled as bad people who were involved in criminal activities and lost their good reputations. The small amount of compensation did not remediate the damage.

As for the case of "tax haven" issue, many famous Thai people did not miss this train. According to the "Panama Papers", there are more than 600 Thai people and companies that ran offshore funds in many offshore financial centres such as the British Virgin Islands, the Cayman Islands and the Republic of Mauritius. Noteworthy, the use of offshore financial centres for business purposes is not an illegal activity per se, it reflects the ethical behaviour of the user. Interesting people in Thailand who purchased the services of offshore financial centres include Mrs. Potjaman Na Pombejra, ex-wife of the former Thai Prime Minister Thaksin Shinawatra, Admiral Banawit Kengrian, former Deputy Permanent Secretary for Defence of Thailand and Mr. Banyong Pongpanit, Advisor to the Prime Minister of Thailand (General Prayuth Chan-ocha). In Thailand, the AMLO revealed to the public that officials would start to investigate people and companies that were listed in the document (Isra News Agency, 2016). Nonetheless, so far, there is no update regarding the case.



## CONCLUSION AND SUGGESTION

Although, it can be seen that the use of civil forfeiture measure to combat organised crime faces many problems in practice. However, it is still recognised as a good supplementary measure in support of other measures in criminal proceedings.

Theoretically, Thailand has laws which is compatible with international standard. Thus, problems are not caused by the laws, but rather in practice. Thus, this article would like to make the following suggestions regarding the use of civil forfeiture measure to combat organised crime in Thailand;

First, the use of civil forfeiture measure should not be used alone, but it should be used with other measures such as other special investigative techniques, mutual legal assistance, witness protection programme. As the tackling of organised crime's asset and personal would result in the best efficiency to combat organised crime.

Second, Thai government need to seriously combat of corruption. Specifically, the AMLO must strictly enforce this practice, in order to show people as well as organised crime group that the government would not allow anyone to break the law without being prosecuted. Moreover, corrupted government officers, who work in the AMLO or other law enforcement agencies, must be prosecuted.

Finally, people of Thailand could help to combat organised crime simply by reporting suspicious activities of illegal organised crime to the government as soon as possible or reporting the corruption of corrupted government officials to the government. The co-operation between people and government would built better society for everyone.

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**BALANCING RIGHTS OF MENTALLY DISORDERED OFFENDERS AND  
PUBLIC'S SAFETY: THE COMPATIBILITY OF CONVENTIONS ON  
THE RIGHTS OF PERSONS WITH DISABILITIES  
AND THAILAND INSANITY DEFENCE'S DISPOSAL**

by

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**ABSTRACT**

The insanity defence's disposal is a part of criminal justice system, which handle mentally disordered offenders who were found to be not criminally responsible and/or punishable. The disposal normally composites of involuntary hospital treatment (typically referred to as a 'hospital order'), supervision orders and absolute discharge. Remarkably, in this modern age of human rights awareness, a question has arisen whether the disposal, specifically the hospital order, violates mentally disordered offenders' rights, especially those rights which are ensured under the Conventions on the Rights of Persons with Disabilities (CRPD). To answer the question, this article will examine related obligations under the CRPD and analysis whether Thai law regarding the disposal is compatible with the CRPD. This article would conclude that the current Thai law does not breach obligations under the CRPD, nonetheless, suggestions to amend the law would be made to balance the protection of offender's rights and public's safety.

**KEY WORDS:** Conventions on the Rights of Persons with Disabilities (CRPD),  
Disposal, Mentally disordered offenders, Human rights,  
Criminal justice system.

## BACKGROUND

Criminal justice system is a system which serves the purpose of social control by dealing with people who breach the rules of society by committing crimes, these people are generally referred to as defendants and offenders. Thus, if they are found guilty of their crime, punishment may be imposed<sup>15</sup>.

Within the criminal justice system, there are also rules which concern mentally disordered defendants and offenders. Among these rules, is the non-punitive measures for dealing with mentally disordered offenders, known as 'disposal'. The disposals would be imposed on those who successfully plead the insanity defence, a criminal defence which is based on the concept that, if one is 'mentally disordered' while committing a crime, one is without blame and should not be held criminally responsible. The range of disposals available to the court enables the criminal justice system to retain the power to deal with mentally disordered offenders who are exempt from punishment, having successfully pleaded the insanity defence. Disposal options will usually include a hospital order, treatment order or an absolute discharge.

It should be noted that the disposal is imposed on a mentally disordered offender rather than punishment because a mentally disordered offender is considered a non-culpable agent under the criminal law, this also implies that he would not be a 'fit' subject for punishment. Moreover, punishing mentally disordered offenders might not serve the purposes of punishment and might even contradict the morality of criminal law. For example, they may not benefit from either retribution or specific deterrence since they (presumably due to the effect of their mental disorders) cannot appreciate the communicative function of the punishment. Of course, if one took an extreme view about punishment, one might consider that, mentally disordered or not, every offender deserves punishment (retribution) and the justification for this punishment may be the safeguarding of public safety by incarcerating the mentally disordered offender. At the same time, it would set an example for society that, regardless of who you are, if you commit a crime, you ought to receive punishment (general deterrence) and perhaps, while incarcerated, the mentally disordered offender could benefit from (forced) rehabilitation. Nevertheless, most theorists would rightly reject this extreme view. For example, retributivists would argue that punishment should only be imposed on those who are morally blameworthy and that moral blameworthiness requires certain mental capacities absent in mentally disordered individuals. Incapacitation theorists might argue that prison is not a suitable place to detain mentally disordered individuals since they may require medical supervision and may be at risk of harm, thus hospital is more appropriate<sup>16</sup>. Further, if mentally disordered individuals are punished, it will communicate that society accepts that punishing a person who is lacking the capacity to be responsible under the law is justified. This is a message that is contrary to the morality of criminal law.

It does not mean, however, that all mentally disordered offenders should walk free because punishment should not be imposed on them. Rather, if some mentally disordered offenders are severely ill, and may be considered a danger to themselves or to public safety, alterna-

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<sup>15</sup> For further discussion, see James Harding, Pamela Davies and George Mair, *An Introduction to Criminal Justice* (Sage 2017).

<sup>16</sup> See 'Punishment' (Stanford Encyclopedia of Philosophy 2015)  
<<https://plato.stanford.edu/entries/punishment/#ThePun>> accessed 19 July 2021.

tive disposals like detention in a mental hospital, with forced therapy, would still be an option. In contrast, if their mental disorder is not severe, several milder disposals i.e. supervision or guardianship orders or even a therapy order (as an out-patient) should be imposed. It is essential to highlight the difference between the principle behind medical disposal, on the one hand, and punishment on the other. It could be argued that the aims of both disposal and punishment are to keep order within society by imposing some sanction on the offender and protecting public safety and both result in the restriction of the offender's liberty e.g. detention in a mental hospital or imprisonment. Nevertheless, the main and most important difference is that medical disposal does not involve public condemnation through being labelled as 'guilty' and thus 'blameworthy'. This exemption from the condemnation conferred by conviction and punishment reflects the non-responsibility of the mentally disordered. Furthermore, it could also be argued that disposal aims to cure the offender from his mental disorder, thus, it benefits the offender in positive way, comparing to punishment.

As for the rationale behind the disposal, the disposal is imposed to protect public safety since it is traditionally viewed that the 'insanity' is potentially dangerous and prone to reoccur<sup>17</sup>. Medical disposal is a tool to rehabilitate the offender and, by rehabilitating the offender, public safety could be safeguarded since the chance of him re-offending would be null, or lower, as the culprit has been eliminated (since the insanity defence is based on the concept that the offender committed the crime due to the influence of his 'insanity'). In a way, a medical disposal is also a tool enabling the state to perform its paternal duty by enforcing (involuntary) medical treatment for the sake of the welfare of the mentally disordered.

Nonetheless, a problem had risen that disposals, especially a hospital order, might affect the human rights of mentally disordered offenders. Since a hospital order is an involuntary detention in a mental hospital, which in practice is one of the standard disposals following a successful plea of insanity. And this detention on the grounds of mental illness might be considered as discrimination against the disabled so it might violate the United Nations Convention on the Rights of Persons with Disabilities (thereafter referred here as 'CRPD').

Thus, this article aims to answer the following question: whether the disposal under the criminal law of Thailand violate the obligation under the CRPD? It would do so by examining the disposal under Thai criminal law, thereafter, it would analyse the related obligation under the CRPD. Afterward, it would conduct a critical analysis whether the current disposals violate the CRPD. Lastly, it would make a proposal on how the law regarding the disposal should be amended to balance the protection of mentally disordered offender's rights and public's safety.

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<sup>17</sup> For example, see Lord Diplock in *R v Sullivan* [1984] AC 156 and Lord Denning in *Bratty v A-G for N. Ireland* [1963] AC 386.

## THE INSANITY DEFENCE'S DISPOSAL UNDER THE CRIMINAL LAW OF THAILAND: CURRENT LAW AND PROBLEMS

As noted, that disposals would be imposed after an insanity defence succeeds. Thereafter, the court has two choices for disposal: a hospital order or discharge. The hospital order is part of the measures of safety contained in Section 48 of the Criminal Code of Thailand, which states:

If the Court is of opinion that the liberation of any person having a defective mind, mental disease or mental infirmity, who is not punishable, or whose punishment is reduced according to Section 65, will not be safe for the public, the Court may give order to send such person to be put under restraint in an institution of treatment. This order may, however, be revoked at any time by the Court<sup>18</sup>.

According to Section 48, a mentally disordered offender who, having successfully pleaded insanity in Section 65, under either paragraph 1 or 2, might receive a hospital order if the court deems that he poses a threat to public safety. Notably, imposition of a hospital order relies upon the court's discretion, as it may be imposed only if the court deems that the offender is dangerous and should receive treatment. Moreover, this order may be revoked by the court anytime<sup>19</sup>. In practice, in order to assess public risk or whether an offender requires treatment in hospital, the court would refer the offender (usually for those cases which fall under the full insanity defence) to the Galaya Institute, the only forensic hospital in Thailand, where 'dangerousness' can be evaluated by forensic psychiatrists (Thomkapanich and Kraipaspong, 2009). It should be noted that, although it may be recommended that the defendant should receive a hospital order, the court can choose not to comply with that recommendation<sup>20</sup>. And in practice, the available research has shown that in 64.1% of 274 cases, the court did not impose a hospital order or treatment as per recommendations (Thomkapanich and Kraipaspong, 2009).

Discharging mentally disordered offenders or patients requires a court order. Section 37 of the Mental Health Act provides general regulations governing discharge as follows: the hospital must report the progress of treatment to the court after 180 days and, if the treatment is ongoing, a report has to be made once every 180 days<sup>21</sup>. If the patient is to be discharged, a report has to be made to the court<sup>22</sup> so that the court may revoke the hospital order. In practice, the discharge procedure is time-consuming since the discharge report has to find its way back to the court and is queued behind other criminal cases before the revoking order may be served. Discharge is recommended solely by the case psychiatrist without any committee to review the case<sup>23</sup>. This practice is questionable as it does not offer any safeguard. Further, in practice, the discharging system is time-consuming since a

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<sup>18</sup> Section 48 Criminal Code of Thailand B.E. 2499 [THA 1956].

<sup>19</sup> *ibid*.

<sup>20</sup> There is no provision in the Criminal Code or Criminal Procedure Code which states that the court is bound to comply with such recommendation.

<sup>21</sup> Section 37, the Mental Health Act B.E. 2551 [THA 2008].

<sup>22</sup> *ibid* Section 38

<sup>23</sup> Regulation of Mental Health Committee regarding the report of the evaluation of fitness for trial and the treatment of mentally disordered offenders B.E. 2551 [THA 2008].

discharge report has to find its way back to the court, where it is placed in the queue behind other criminal cases, before a revoking order can be imposed. In this regard, mentally disordered offenders can be deprived of freedom unnecessarily since they have to wait for release.

## **THE OBLIGATIONS UNDER THE UNITED NATIONS CONVENTION ON THE RIGHTS OF PERSONS WITH DISABILITIES (CRPD) AS RELATED TO THE INSANITY DEFENCE'S DISPOSAL**

The CRPD was adopted on 13 December 2006 at the United Nations Headquarters in New York. It is intended to be human rights instrument, which restates that every person with all types of disabilities must enjoy all human rights and fundamental freedoms (United Nations, 2021).

As Thailand ratified the CRPD on 29 July 2008 (United Nations, 2021), it is bound to comply with the obligations under the CRPD, thus, it is essential to examine the related obligations first to be able to evaluate whether Thailand's disposal is compliance with the CRPD.

The obligations under the CRPD which concerned the insanity defence's disposal are article 1, 4(b), 5, 12, 14.

The CRPD article 1 concerns the purposes of the CRPD, which prohibits any distinction, exclusion or restriction based on disabilities, including mental disabilities<sup>24</sup>. While article 4(b) concerns an obligation on states parties to replace and repeal legislation and other administrative measures that contain discrimination based on disabilities. And article 5 further requires states to ensure equality and non-discrimination under the law<sup>25</sup>. The equal recognition under the law is further elaborate in Article 12, which concerned with how legal systems themselves would view and help people with disabilities to be legal actors<sup>26</sup>. Finally, article 14 concerns liberty and security of a person with disabilities<sup>27</sup>.

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<sup>24</sup> The CRPD art. 1

Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

<sup>25</sup> CRPD art. 4(b)

To take all appropriate measures, including legislation, to modify or abolish existing laws, regulations, customs and practices that constitute discrimination against persons with disabilities;

CRPD art. 5

1. States Parties recognize that all persons are equal before and under the law and are entitled without any discrimination to the equal protection and equal benefit of the law.

2. States Parties shall prohibit all discrimination on the basis of disability and guarantee to persons with disabilities equal and effective legal protection against discrimination on all grounds...

<sup>26</sup> CRPD art. 12

1. States Parties reaffirm that persons with disabilities have the right to recognition everywhere as persons before the law.

2. States Parties shall recognize that persons with disabilities enjoy legal capacity on an equal basis with others in all aspects of life.

<sup>27</sup> CRPD art. 14 1.

b) Are not deprived of their liberty unlawfully or arbitrarily, and that any deprivation of liberty is in conformity with the law, and that the existence of a disability shall in no case justify a deprivation of liberty...

Thus, in this regard, the CRPD Committee (hereafter referred as the committee) takes the view that the disposal (following successful reliance on the insanity defence) which include hospital orders (involuntary detention in a mental hospital for treatment) are directly contrary to Article 14 (The CRPD Committee, 2015), as well as Article 12. As article 14(a) prohibits the detention based on disabilities, and a hospital order is an involuntary detention in a mental hospital based on mental disabilities. Furthermore, a hospital order might be in breach of Article 12 also since it is contrary to the principle of equal recognition under the law, in which it directly and only targets people with (mental) disabilities.

Consequently, as a result of the committee's strict interpretation of Article 12 (2) and 14 (The CRPD Committee, 2014), the committee has suggested that any determination of mental incapacity should be abolished (Gooding and Bennet, 2018, p. 141). As the committee interprets Article 14 as prohibiting all types of involuntary mental health detention, even when the detention is based on an evaluation that the person is likely to harm himself or others or in a case where there is a need for care and treatment (The CRPD Committee, 2014). In this regard Minkowitz (2014), has also argued that hospital orders following insanity acquittals are unjustifiable since they are based on principles of rehabilitative and correctional penal detention. Remarkably, her opposition to involuntary detention was so strong, as she put it, (she) "*would prefer death to another round of forced psychiatry*" (Minkowitz, 2015).

Nonetheless, besides stating that involuntary detention is not compatible with Article 14, neither the committee nor Minkowitz seem to be addressing the issue as to which method may acceptably be imposed on potentially harmful mentally disordered offenders to ensure public safety. As the committee suggests that mentally disordered offenders should be treated as any other person (The CRPD Committee, 2014), this implies that they would find it acceptable if mentally disordered offenders are either acquitted or imprisoned under the ordinary criminal justice system.

### **ANALYSING THE COMPATIBILITY OF THAILAND INSANITY DEFENCE'S DISPOSAL AND THE CRPD**

As noted, that the only available disposal of the insanity defence under Thailand criminal law is a hospital order under Section 48 of the Criminal Code of Thailand. And as the above arguments claimed that the disposal, especially the hospital order, violates the CRPD. Thus, it is essential to examine in the concept whether the disposal (a hospital order) is compatible with the CRPD's obligations.

As for the argument that the disposal, especially the hospital order, violates the CRPD, it is noteworthy that the CRPD is based on the 'social model of disability' according to which society has to assist and adapt to the needs of those with disabilities (Bartlett, 2012). Thus, General Comments on the Convention may have taken such a hostile view toward disposals as it is believed that imposing involuntary and/or coercive measures on the mentally disordered is against the convention's underlying principle that society should adapt to the needs of the disabled person. In this regard, it could be argued that the committee has interpreted the CRPD too strictly and this interpretation fails to take proper account of the justifications for interfering with the liberty of mentally disordered offenders, for example, if in a case where mentally disordered offender seriously need a treatment for his own sake, a hospital should be available for him. Moreover, it may be argued that, in some



rare cases where the disabled person poses a serious risk to public safety, an exception should be made to this underlying principle and this would allow the disposals attaching to the insanity defence to be imposed only when it is strictly necessary.

Further, it could be argued that the General Comments are only ‘helpful interpretations’, rather than binding international law, so states parties are free to depart from them (Perlin, 2017). In this regard, it has also been argued that the General Comments still leave some significant questions unanswered, i.e. how should states parties deal with the cases of “*risk, undue influence and unclear will and preferences*” under Article 12 (Series and Nilsson, 2018)? Moreover, neither Article 4, which concerns the general obligations of the states parties, nor Article 12, which requires the equivalent treatment of persons with disabilities and other non-disabled persons under the legal system, specifically states that disposal is not allowed.

Additionally, and most importantly, it is also possible to take a ‘narrow’ interpretation of Article 14, according to which this Article only prohibits detention based on disability *alone*. In this narrow interpretation, detaining an individual on the basis of mental disorder *in combination with other justifications*, such as a risk to public safety arising from the mental disorder, would not violate Article 14 (Gooding and Bennett, 2018). Interestingly, similar provision, which prohibit the deprivation of liberty of a person, could be found Article 5(1)<sup>28</sup> of the European Convention on Human Rights (ECHR). In which, it was held that a hospital order is not in breach of the article since a ‘hospital order’ would not be imposed unless a person is suffering from mental disorder(s) that need treatment (Law Commission, 2013 and Scottish Law Commission, 2003). This need for treatment would be a legitimate aim that could render the detention of the individual compatible with the ECHR. Further, the leading European Court of Human Rights (ECtHR) decision in *Winterwerp v Netherlands* also confirmed that as long as there are procedural safeguards and the treatment and/or detention are necessary, involuntary detention and treatment are allowed. It could be seen that Article 5(1) of the ECHR has been interpreted using a narrow interpretation approach, thus, a hospital order is justified. In this regard, this implies that the CRPD could have been interpreted in the same way. Hence, a hospital order would not breach Article 14.

In conclusion, if a more balanced view of the interpretation of Article 4(b), 5, 12, 14, is taken, the disposal (a hospital order) under the criminal law of Thailand does not violate the CRPD.

## CONCLUSION AND SUGGESTIONS

The disposals are needed since they safeguard the public as well as protecting offenders’ safety and welfare. Moreover, the disposals for mentally disordered offenders would not be in breach of obligations under the CRPD since, if the main objective of the CRPD is to promote the welfare of persons with disabilities, the objectives of detention for treatment in hospital, and involuntary treatment, are precisely that. In the absence of state intervention to impose involuntary treatment or other suitable measures, who would be looking

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<sup>28</sup> Article 5

1. Everyone has the right to liberty and security of person. No one shall be deprived of his liberty save in the following cases and in accordance with a procedure prescribed by law...

after their welfare?<sup>29</sup> Furthermore, it is also the state's duty to impose the disposal. Thus, the disposals are justified, if imposed appropriately, as they benefit both offenders and the public. Since it is a tool to protect public's safety from the possibly 'dangerous' mentally disordered offenders, as they are confined for a period of time, and at the same time, it is also a tool to rehabilitate mentally disordered offenders. Which could result in a positive outcome as once they are discharged, they would be cured or at least they are stable enough, thus, the risk of them to re-offend would be lower.

Nonetheless, to ensure that mentally disordered offenders' rights are not violated, it is suggested the disposal of the insanity defence of Thailand could be amended as following;

First, since the current Thai law does not require medical evidence for making the disposals. Thus, it is suggested that before determining a suitable disposal, evidence from at least two medical practitioners should be required. Preferably, these practitioners should be registered medical physicians, psychiatrists or qualified clinical psychologists, depending on what type of medical condition the defendant is relying on. The court should also be bound to order a disposal in accordance with the medical evidence, unless it has compelling grounds to do otherwise. This would act as a safeguard to protect the right of mentally disordered offenders by ensuring that the court must impose a medical disposal in the appropriate cases and, at the same time, would limit the tendency of the court to avoid ordering a medical disposal (the current problem). Notably, this is based on the idea that, since mentally disordered offenders are 'sick', they should not be punished but should be diverted to a rehabilitation track instead. Medical practitioners are in the best position to evaluate whether offenders need medical disposals or not (and, if so, what kind).

Second, a wider range of disposals should be introduced. As wider range of disposals would allow the court to select the most appropriate type of disposal for each individual offender, benefitting not only the offender but also promoting public safety. In this regard, it is suggested that the disposals should be as the following; the hospital orders, the hospital orders with restriction (the patient/offender would be released only by the permission from the panel, preferably consisted of psychiatrist/clinical psychologist, social worker and court/prosecutor), interim hospital orders (a temporary commitment in the hospital for observation), guardianship orders and supervision and treatment orders (as an out-patient).

Third, any order discharging mentally disordered offenders from hospital should be issued only with supporting medical evidence. Medical evidence should be given by the case psychiatrist or physician along with another psychiatrist or physician (two medical testimonies in total). The discharge could be authorised via a court order and this would create a 'double-lock' system, which should act as a safeguard before mentally disordered offenders (who presumably had committed violent crimes) could be discharged. Nonetheless, one potential downside of discharge via court order would be the delay since the court often has a full schedule of cases. To solve this problem, it is suggested that the law<sup>30</sup> could be amended to grant a prosecutor the authority to issue an order discharging a mentally disordered offender from hospital as it would take less time than issuing a court order. This process would ensure that mentally disordered offenders would not be detained longer than necessary to ensure their right of deprivation of liberty.

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<sup>29</sup> Specifically, for those with neither family nor friends.

<sup>30</sup> Under the current law (Criminal Code of Thailand), it is the court's responsibility to make the discharging order.

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# **LEGAL FUNCTIONS OF MULTIMODAL TRANSPORT BILLS OF LADING AFFECTED TO THE TRANSPORT OPERATORS IN MULTIMODAL TRANSPORT**

by

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## **ABSTRACT**

This research was conducted to examine legal implications of multimodal transport bills of lading on transport operators involved in multimodal transport, particularly multimodal transport operators (MTOs), in the context of the Multimodal Transport Act B.E. 2548 of Thailand. To reduce legal confusion of the legal status and functions of multimodal transport documents which contributes to the uncertainty of rights and liabilities of the contractual parties, the research findings found that some provisions of the MT Act should be amended in accordance with ASEAN Framework Agreement on Multimodal Transport 2005. As a result of the amendment, the legal framework of multimodal transport law in Thailand would be modernised in line with international trade requirements and practices. In addition, the greater harmonisation of multimodal transport law in ASEAN would also be achieved fruitfully.

**KEY WORDS:** Multimodal transport bills of lading, Multimodal transport documents,  
Multimodal transport operators (MTOs), Thai Multimodal Transport Act  
B.E.2548

## INTRODUCTION

Multimodal transport is the integrated transport of goods in which at least two different modes are performed in one journey under one single contract with one contractual responsible person known as a multimodal transport operator (MTO). With sourcing strategies related to integrated transport and logistics services evolved as part of the global supply chains, multimodal transport has become an important means to improve transport efficiency and trade expansion. The influence of multimodality has been visible in the fast-growing economies around the world. It is a key component of trade facilitation critically contributing to global economic growth, particularly in developing countries such as Thailand and other ASEAN countries.

Characterised by door-to-door delivery resulting from modern integrated transport system, multimodal transport has stimulated demand for the improvement of infrastructure, technology, and transport network. Additionally, it is also associated with legal rigidity (Hoeks, 2007). It is believed that, with the advancement of multimodal transport framework, efficient and safe transport services can be provided under the best possible environmental, economic and social conditions (UNCTAD, 1995). Several attempts have been made over the previous few decades to create a harmonised multimodal transport framework at international level. Unfortunately, none has been successful (Nikaki, 2013). Nevertheless, the significance of developing a modernised multimodal transport regime has been recognised at all levels. This is evidenced by the adoption of regional multimodal transport agreements, as well as national multimodal transport law in several countries across the world.

In ASEAN, the ASEAN Framework Agreement on Multimodal Transport (AFAMT) was adopted in 2005 for the purpose of creating a unified multimodal transport regime within the region. It is believed that successful formulation of legal framework on multimodal transport in ASEAN through the adoption of this Agreement would facilitate free flow of goods and transport services within and beyond the region. Ultimately, effective multimodal transport services would contribute to the region's and its members' economic growth and prosperity.

As a founding member of ASEAN, Thailand enacted the Multimodal Transport Act B.E.2548 (MT Act) in order to fulfil its commitment to implementing the AFAMT. Apart from the purpose to establish a well-modernised legal framework on multimodal transport in Thailand, it has been argued that the MT Act would improve the efficiency of door-to-door transport services in the region, thereby fostering the growth of logistics industry in Thailand.

To move towards a streamlined and efficient multimodal transport, rights and liabilities of the parties involved in multimodal transport must be definite, predictable and unambiguous (Hoeks, 2010). Apart from terms and conditions specified in the multimodal transport contract, the rights and liabilities of the parties are significantly embodied in multimodal transport documents. Thus, the issue about legal functions of multimodal transport documents has been discussed for decades.

This research aimed to examine legal implications of multimodal transport documents, particularly multimodal transport bills of lading, on the rights and liabilities of multimodal transport operators (MTOs) under the MT Act of Thailand. It is worth noting that the MT

Act uses legal terminology to call transport documents issued under multimodal transport contracts differently from international legal instruments related to multimodal transport. This difference leaves open the issue of the consistency of legal status and functions of multimodal transport documents under the MT Act and other multimodal transport regimes, particularly the AFAMT. What has complicated matters is that the narrow wording ‘multimodal transport bills of lading’ the MT Act adopt that may cause ambiguity and legal uncertainty by leading to misconception of its legal functions, especially a document of title function, as well as the parties’ rights and liabilities associated with the documents. The findings would help in proposing recommendations to further modernise and standardise Thai legal framework governing multimodal transport.

To do this, general legal concepts of bills of lading and other transport documents, which have substantially taken a lengthy root in the multimodal transport context, will be first analysed to provide fundamental understanding of their legal functions. Then, legal functions of the bills of lading and other transport documents as defined by the Thai Carriage of Goods by Sea Act B.E.2534 (Thai COGSA) will be demonstrated to provide Thai legal perspectives on transport documents in sea carriage. Thai COGSA is the first specific law on transport and is often used as the groundwork for other transport laws in Thailand, including the MT Act. Thereafter, the rights and liabilities of the MTOs as a contractual carrier who is responsible to issue multimodal transport document can be scrutinised. Ultimately, feasible recommendations would be made in order to modernise Thai multimodal transport law to meet international trade requirements.

## **RESEARCH METHODOLOGY**

This research used a doctrinal approach to elaborate the implications of the multimodal transport documents on multimodal transport operators under the Multimodal Transport Act B.E.2548 of Thailand. Based on a documentary research method, the analysis of legislations, international agreements, court judgments, journal articles, and other data sources relating to the legal status and functions of transport documents produced under multimodal transport contracts were utilised in the research. The doctrinal analysis was conducted in order to make feasible recommendations for Thailand to update its national legislation regulating multimodal transport to modernise it in accordance with international trade standards.

## **RESEARCH FINDINGS**

### **General concepts of bill of lading and other transport documents in the context of international trade**

It is well acknowledged that legal functions of transport documents, particularly bills of lading and waybills, are critical in the context of international trade. Thus, it is necessary to demonstrate legal functions of these documents to provide a solid foundation for further analysis of these functions in the multimodal transport context.

#### ***Bills of Lading***

Bills of lading are arguably the most important and influential transport document in international trade transactions. Historically, the bill was exclusively related to the sea carriage, but it is currently often used for other types of transportation. The bill is theoretically rec-

ognised to serve three legal functions: (i) as a receipt for goods shipped; (ii) as evidence of carriage contract; and (iii) as a document of title.

Initially, traditional ocean bills of lading were issued as a bailment receipt providing details of the goods received by the carrier (Wilson, 2010). Having legal function as a receipt for goods shipped, the issuance of the bills has significant impacts on the carrier's liability. Generally, the carrier is obliged to deliver the goods to the ultimate consignee or the endorsee when the bill is endorsed by the named consignee for the return of the original bill. He is also legally liable for non-conformity of goods delivered at the destination. According to Article III (4) of the International Convention for the Unification of Certain Rules of Law relating to Bills of Lading (Hague Rules) as an example, such bills are prima facie evidence for the shipper, and conclusive evidence for the consignee or endorsee, of the receipt of the goods as described therein. The carrier is thus responsible to deliver the goods in the quantity and condition stated in the bill. In contrast, the consignee or endorsee has the right to sue the carrier for loss or damage of goods found at the port of discharge. Nevertheless, according to *The Mata K* ([1998] 2 Lloyd's Rep 614) and *The Esmeralda* ([1988] 1 Lloyd's Rep 206), the carrier can refuse to issue the bill containing those details of goods if he has reasonable grounds to believe that the goods do not correspond with the details normally provided by the shipper.

Secondly, the bill of lading serves as evidence of carriage contract. Details on the front of the bill, including a set of specific contractual conditions written on the reverse of every typical bill of lading, give good evidence of the carriage contract (Wilson, 2010). However, the bill itself is not the carriage contract (Treitel & Reynolds, 2011) because the parties normally conclude the carriage contract orally prior the issuance of the bill. As a result, as shown in *Crook v Allan* ((1879) 5 QBD 38), the contractual parties are permitted to provide further evidence to prove to the contrary to the terms written in the bill.

Thirdly, the bill of lading serves as a document of title. This most prominent function of the bill facilitates the cargo interests in reselling the goods during transit, so that the bill can be transferred to third parties via endorsement. The legal function as a document of title has substantially affected the parties' rights and obligations. The carrier is responsible for delivery of goods to the holder of the bill against the production of an original bill. If he delivers the goods in good faith in the exchange for the surrender of the bill, the carrier is alleviated from liabilities arising from any deficiencies of the holder's right to delivery of goods (Wilson, 2010). Meanwhile, although the lawful holder is not a contractual party, he is capable of obtaining delivery of goods at the destination and making claim directly against the carrier for loss or damage of the goods. Regarding this legal function, the holder can also transfer such rights to the endorsee or the transferee during transit (Lorenzon, 2012).

Furthermore, there is a heated debate over the legal status and functions of another type of bills of lading known as 'straight bills of lading.' This type of the bills provides a specific name of consignee without other additional wording that allows the transfer of the bill, such as 'to order.' Consequently, the straight bills of lading are likely considered non-negotiable. However, in *The Rafaela S*, the House of Lords ruled that the straight bills of lading are still transferable, even if they are transferred from the consignor to the designated consignee. Thus, the straight bill of lading continues to be regarded as a document of title, and the carrier is still obliged to deliver the goods in exchange for the surrender of the original document (Baughen, 2012). In this regard, P&I Clubs recommend that the car-

riers should use waybills rather than non-negotiable bill of lading, such as the straight bill of lading. This is to minimise legal uncertainty and ambiguity in this function which remains an ongoing issue of debate.

### ***Waybills***

Waybills are non-negotiable transport document that can be issued for sea carriage as ‘sea waybills’ or for air carriage as ‘air waybills.’ Theoretically, the legal functions of waybills are identical to those of bills of lading, with the exception of a document of title function (Baughen, 2012). In particular to sea carriage, sea waybills are frequently issued instead of the bills of lading where there is no need to resell the goods during transit. Unlike the bills of lading, the carrier is liable to deliver the goods to the consignee named in the waybill under the condition that the named consignee must produce satisfactory proof of his identity, without the production of an original waybill.

### ***Delivery Order***

A delivery order is a transport document issued by the carrier in connection with the release of goods at the destination. According to articles 19-25 of the UCP 600, it is regarded as a release document issued at the last stage of carriage to release the goods to the consignee indicated in the bill of lading or waybill or to the lawful holder of the bill in case of the bearer bill. Thus, the delivery order typically lacks three legal functions provided by the bills of lading. It is neither a carriage contract, nor is it evidence of the contract.

To conclude, it could be argued that the ocean bill of lading is a transport document featured with three legal functions so that it confers liabilities to the carrier in the highest degree (Goode, 2010). In contrast, other transport documents, such as the waybills and delivery orders, lack a transferrable document of title function so that they give the parties the rights and liabilities in more restricted scope.

## **INTERNATIONAL PERSPECTIVE ON LEGAL STATUS AND FUNCTIONS OF MULTIMODAL TRANSPORT DOCUMENTS**

According to the United Nations Convention on International Multimodal Transport of Goods 1980 (MT Convention) and the ASEAN Framework Agreement on Multimodal Transport (AFAMT), for instance, multimodal transport documents are commonly divided into two categories: negotiable and non-negotiable multimodal transport documents. Both are featured with legal functions in a different way.

Regardless of its negotiability, multimodal transport documents possess legal functions of receipts of goods in the same manner as ocean bills of lading and waybills do (Tettenborn, 2014). Thus, the multimodal transport operator (MTO) is responsible for delivery of goods described in the multimodal transport document to the named consignee or endorsee. He is also liable for any nonconformity of goods, unless proven otherwise. However, in case of negotiable multimodal transport documents, proof to the contrary is not admissible if the document has been transferred to the third party acting in good faith. These can be seen in



many standard forms of multimodal transport documents e.g., the FIATA Multimodal Transport Bill of Lading.

However, the legal function as evidence of multimodal transport contracts remains controversial at international level. The availability of this function is based on mandatory law governing such multimodal transport contracts. Article 1 of the AFAMT 2005 and Section 4 of the Thai Multimodal Transport Act B.E.2548 (MT Act), for example, state unequivocally that the multimodal transport document is recognised as evidence of multimodal transport contract. In contrast, due to a paucity of judicial judgements on this issue, this function is unclear under common law. However, the complexity of multimodal transport has led the relationship between the holder of multimodal transport documents and the MTO to be associated with the extended scope of application of the UK Carriage of Goods by Sea Act 1992. This assumption would provide the holder's right to sue the MTO for reimbursement if goods were lost or damaged during transit of the multimodal transport.

Additionally, there has been a heated debate on the legal function of multimodal transport document as a document of title, which contributes to legal uncertainty and unpredictability in international multimodal transport frameworks. The AFAMT, for instance, provides no provision for this issue. Moreover, unlike traditional bills of lading, the multimodal transport documents could not be regarded as a document of title under common law since they do not fulfil all of the requirements for being a document of title (De Wit, 1995). This is primarily due to the fact that multimodal transport documents in its nature are not always provided by the sea carrier and do not necessarily involve sea leg (Treitel, 2014). A number of multimodal transport services consists of dry modes of transport, such as road, rail and air, but excluding sea carriage. Moreover, reselling the goods during transit under multimodal transport contracts is unlikely to happen very much in practice, so that it seems no need to issue negotiable transport document in this case.

Furthermore, as characterised by the door-to-door system, multimodal transport documents may have the same status as a received for shipment bills of lading, in which its legal function as a document of title remains questionable under common law (Thomas, 2014). There is no judicial confirmation by the court on this matter. All of this creates legal uncertainty in the document of title function of multimodal transport documents under common law. However, given the importance to its transferability and the current trend of international trade practice which is the source of mercantile custom at common law, negotiable multimodal transport documents are more accepted as a document of title than non-negotiable documents (Ramberg, 2010). Thus, it seems that the negotiable multimodal transport documents will become more accepted as documents of title at common law if the underlying ground of mercantile custom can be fulfilled (Thomas, 2014).

More precisely, the legal functions of the negotiable multimodal transport documents are widely accepted in international trade practice in the parallel way as the bills of lading (Aikens, Lord & Bools, 2006). Acceptance includes any document that can be transferred either by indorsement or, in case of a bearer document, by delivery without indorsement.

On the other hand, non-negotiable multimodal transport documents have thus far been largely recognised in the same way as waybills or other transport documents that lack transferability and a document of title function. These functions have affected to the rights and liabilities of the MTO in the same way as affected to that of the sea carriers in case of bills of lading and waybills.

### **BILLS OF LADING AND OTHER TRANSPORT DOCUMENTS UNDER THE THAI CARRIAGE OF GOODS BY SEA ACT B.E.2534**

Under the Thai Carriage of Goods by Sea Act B.E.2534 (Thai COGSA), a bill of lading is typically featured with three legal functions which are in line with international acceptance described above. It is a transferable document of title, a receipt for goods shipped or received for shipment, and evidence of carriage contract. However, some considerable differences need to be taken into account.

According to section 3, the bill of lading constitutes a receipt of identified goods by the carrier. He undertakes contractual obligations to carry the goods to the destination and deliver the goods to the consignee in exchange for the production of the original bill. However, due to sections 12 and 13, the carrier is obliged to issue the bill of lading only when requested by the shipper. If the shipper does not request the ‘shipped bill of lading’, the carrier is entitled to issue the ‘received for shipment bill of lading.’

Regarding the received for shipment bill of lading, it is a document confirming that the goods have been received by the carrier but not yet loaded on board a ship (Eagariyakorn, 2017). Although it is difficult to recognise the received for shipment bill of lading as document of title under common law (Kongphok, 2018), this type of bill serves three legal functions as provided by shipped bills of lading under the Thai COGSA. According to section 3 and 20, the received for shipment bill is a document of title that can be transferred to a third party by endorsement. Nonetheless, if the shipped bill of lading is required after the issuance of the received for shipment bill, the carrier is under no obligation to issue the shipped bill until the received for shipment bill has been successfully returned to the carrier.

Once the bill of lading is issued, the Thai COGSA grants the rights to obtain delivery of goods and to sue the carrier based on the terms contained in the bill. These rights belong to the consignee named in the bill or the lawful holder of the bill in the event of bearer bills. The bill also entitles the holder the right to sell the goods during transit (Jongjakapan, 2021). Nonetheless, the carrier's responsibilities resulting from the bill of lading will be discharged only when the goods are delivered in exchange for the original bill. Otherwise, he is liable for damages resulting from unlawful delivery to the lawful holder of the bills, who has legitimate right to receive actual possession of the goods.

In case of sea waybills, the Thai COGSA recognises it as any transport documents which are not documents of title. Therefore, the carrier's rights and liabilities under the waybills are consistent with international acceptance.

## **LEGAL IMPLICATIONS OF MULTIMODAL TRANSPORT DOCUMENTS UNDER THE THAI MULTIMODAL TRANSPORT ACT B.E.2548**

Prior to the enactment of the Multimodal Transport Act (MT Act) in 2005, Thailand had no specific law governing carriage of goods by multimodal transport contracts. Therefore, any disputes relating to the multimodal transport carriage were governed by existing laws and regulations related to the carriage of goods (Eagjariyakorn, 2018). Depending on such circumstances, the Thai Civil and Commercial Code, the Carriage of Goods by Sea Act B.E.2534, the State Railways of Thailand Act, or other relevant laws may regulate the issue.

As a consequence of the growing relevance of multimodal transport for interregional and intraregional trade within ASEAN, the ASEAN Framework Agreement on Multimodal Transport (AFAMT) was adopted as a unified model law for all ASEAN member states. Thereafter, the AFAMT was used as a point of reference in drafting Thailand's national law on multimodal transport, namely the 'Multimodal Transport Act B.E.2548.'

The purpose of the enactment of the MT Act is to establish legal framework for multimodal transport in Thailand. This is due to the realisation of the importance of multimodal transport, which has progressively influenced the Thai economy in both international and domestic trade arena.

In particular to transport documents, the MT Act uses the limited phrase 'bill of lading' for all types of documents issued under the multimodal transport contract. This is done to ensure compatibility between the MT Act and other national transport laws, especially the Thai COGSA. However, using legal terminology which is inconsistent with international standards may become an impediment to the development of Thai multimodal transport law. In addition, using non-negotiable multimodal transport bills of lading instead of waybills may possibly lead to concerns on its document of title function as debated in case of straight bill of lading.

The MT Act categorises multimodal transport bills of lading into two categories. One is negotiable multimodal transport bills of lading, which are identical to negotiable multimodal transport documents in international context. Another is non-negotiable multimodal transport bills of lading which are equivalent to other transport documents in international context that lack document of title function. More specifically, the non-negotiable multimodal bill of lading under the MT Act refers to any transport documents other than bills of

lading. Thus, waybills, delivery orders, consignment notes, and other non-negotiable multimodal transport documents fall under this category.

According to the MT Act's provisions, multimodal transport bill of lading has some similar characteristics with traditional ocean bills of lading, depending on its negotiability. Despite the fact that they use the same terminology, multimodal transport bills of lading and traditional ocean bills of lading are not the same due to their different legal functions. Only the negotiable multimodal transport bill of lading has the same legal functions as the bill of lading under the Thai COGSA.

According to the definitions of 'multimodal transport' and 'multimodal transport operators' in section 4, it could be argued that the MT Act applies to all international multimodal transport contracts in which the place for the MTO to take charge of the goods or the place for the MTO to deliver the goods, as specified in the contract, is located in Thailand and another place is in another country. Furthermore, according to section 5, this Act can also apply to domestic carriage by at least two different modes of transport under a single unimodal transport contract. However, this extension is available only if the parties have agreed in writing. As a result, the multimodal transport bill of lading is not always necessarily be issued in case of domestic carriage. Instead, other transport documents might be issued to serve as a receipt of goods and as evidence of multimodal transport contract. Thus, the MTO's rights and liabilities are different from the case when the multimodal transport document was issued in the form of a bills of lading.

Although the MT Act refers the multimodal transport document as a 'multimodal transport bill of lading,' it does not qualify as a bill of lading under Thai COGSA unless issued by the carrier, not the freight forwarder acting as the carrier's agent (Treitel, 2014). In the context of multimodal transport, many forms of transport documents have been utilised. However, as discussed previously, the legal status and functions of these documents are vastly different. One should add the ambiguity and legal uncertainty associated with the legal terms used in the MT Act, specifically relating to its diverse effects on the default value of a document of title function and other crucial matters. Therefore, the use of the term 'bill of lading' for all transport documents issued under multimodal transport contracts under the MT Act is attributable partly to the confusion of its legal functions due to the exclusivity of the ocean bill of lading. As a result, the rights and liabilities of the MTO who assumes the responsibility for the performance of the entire journey are also uncertain. It thus comes as no surprise that there is a suggestion to minimise the prospect of legal uncertainty and ambiguity emerging from the term 'multimodal transport bills of lading' by replacing this term with 'multimodal transport documents' which is used in the AFAMT and other international multimodal transport regimes. This amendment will provide better prospects than using the previous terminology because it can promote legal certainty and unambiguity, including the consistency of legal terminology used worldwide.

## CONCLUSION AND RECOMMENDATIONS

In response to the demand for door-to-door transport services, the trend continues towards multimodal transport that provides integrated transport services. Due to the fact that there is no unified multimodal transport framework at international level, several regional integration initiatives and individual countries have developed its own legislations governing multimodal transport. These efforts are aimed at establishing a modernised multimodal transport regime that will serve as a trade-facilitating means for achieving greater level of trade expansion and economic growth. As a developing country and ASEAN member, Thailand enacted the Multimodal Transport Act B.E.2548 (MT Act) to implement the ASEAN Framework Agreement on Multimodal Transport 2005 (AFAMT). Moreover, it is expected that the multimodal transport regime established by the MT Act would eliminate legal obstacles to the multimodal transport harmonisation and standardisation. With the MT Act, multimodal transport services will contribute to the growth of door-to-door transport services, ultimately making the Thai transport industry plugged into the global supply chains. These can be accomplished by strengthening legal certainty and predictability of the rights and liabilities of the parties involved in multimodal transport services, particularly MTOs. Since the rights and liabilities of the parties in the international carriage of goods are substantially correlated with legal functions of a transport document issued for the carriage contract, the wording applied for such documents must be unambiguous. Thus, this research suggested that the term ‘multimodal transport bill of lading’ recently used in the MT Act should be replaced by the term ‘multimodal transport document.’ This modification would minimise the risk of legal ambiguity and uncertainty emerging from its interpretation, while also increasing degree of understanding on the legal status and functions of such documents. Ultimately, the Thai multimodal transport legislation will be modernised to meet international trade standards, particularly the AFAMT, enabling for greater harmonisation of multimodal transport law in ASEAN.

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**CONTRIBUTING FACTORS TO DIGITAL MARKETING POTENTIAL FOR OTOP  
ENTREPRENEUR: A CASE STUDY OF BAN TAM GLONG VILLAGE  
IN TAMBON EKKARAT, AMPHOE PA MOK,  
ANG THONG PROVINCE**

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**ABSTRACT**

Due to the business transformation in the Digital Era. One Tambon One Product (OTOP) entrepreneurs in Thailand need to understand and develop their business potential to increase the value of the product and enter the world market. The objectives of this research were to examine the contributing factors to the potential of digital marketing for OTOP entrepreneurs. This research used a questionnaire as a research tool. The researchers chose all of 30 OTOP entrepreneurs in Ban Tam Glong Village as participants. Data analysis was done using descriptive statistics; mean, percentage, and standard deviation. The percentage of female and male participants were 56.70 and 43.30, respectively. The results showed that digital channel usage behavior for digital channels in daily life was 1-2 hours per day. The digital usage behavior for searching general knowledge was 1-2 times per day. Participants got a medium level of importance of the factors that contribute to the potential of OTOP to use digital marketing. OTOP entrepreneurs had medium to high potential to use digital marketing. Administrative organizations and government agencies should work to improve digital media skill management.

**KEY WORDS:** Digital marketing, OTOP Entrepreneurs,  
Ban Tam Glong Tambon Ekkarat Village

## **INTRODUCTION**

To build the country's competitiveness in the next 20 years, it is necessary that we need to converse Thai entrepreneurship into "Digital Entrepreneurship". It keeps pace with technology and innovation and uses it to drive business, especially among small and medium enterprises. For this reason, the business operations of entrepreneurs play an important role in stimulating it. The economy is flourishing, and the strength of entrepreneurship will help the country to compete at the world trade level. Modern entrepreneurs must have the skills of the future, for example, attitude, skills, abilities and knowledge to deal with the increasingly fierce competition. Due to rapid technological change, Thai government created the National Strategy to guide the entrepreneurs of small and medium enterprises. This strategy will serve as a guideline for development and promote the new generation of entrepreneurs. It will become stronger and be the key mechanism for the expansion of Thai economy. It is the first through which brands can reach consumers. Nowadays, online media is a part of people's life in this era. Online media such as Facebook, Line, Instagram, can reach customers better than advertising on billboards. Business is starting to adapt to online social media and is continuously expanding. This makes online business broader, faster, and more accessible. It is also convenient and innovative to build a portfolio through online media.

At present, the administrators of Ekkarat have visions for digital marketing, OTOP entrepreneurs have conducted research "Contributing Factors to Digital Marketing Potential for OTOP Entrepreneur: A Case Study of Ban Tam Glong Village in Tambon Ekkarat, Amphoe Pa Mok, Ang Thong Province". The purpose of this research to increase the value of the product to enter the world market without borders.

## **OBJECTIVES**

1. To study the demographic data of OTOP entrepreneurs of Ban Tam Glong Village in Tambon Ekkarat, Amphoe Pa Mok, Ang Thong Province.
2. To study the behavior of using digital channels in daily life of OTOP entrepreneurs of Ban Tam Glong Village in Tambon Ekkarat, Amphoe Pa Mok, Ang Thong Province.
3. To study the behavior of the digital activities of OTOP entrepreneurs of Ban Tam Glong Village in Tambon Ekkarat, Amphoe Pa Mok, Ang Thong Province.
4. To study contributing factors to the potential for OTOP using digital marketing of Ban Tam Glong Village in Tambon Ekkarat, Amphoe Pa Mok, Ang Thong Province.



## CONCEPTUAL FRAMEWORK

### Personal Data

1. Gender
2. Age
3. Education
4. Income
5. Period of opening OTOP entrepreneur

### Factors of behavior for using digital channels

1. Behavior of using digital channels in daily Life
2. Behavior of using digital channels of OTOP entrepreneurs
3. Factors those contribute to the potential of OTOP using digital marketing (knowledge and skill)

Digital Marketing Potential for  
OTOP entrepreneurs  
Ban Tam Glong Klong Ekkarat  
Village Amphoe Pa Mok  
Ang Thong Province

## HYPOTHESIS

OTOP entrepreneurs can use technology to increase their digital marketing potential.

## METHODOLOGY

### Design and Sample

The researchers chose all of 30 OTOP entrepreneurs in Ban Tam Glong Village as participants. Data analysis used descriptive statistics to analyze data; mean, percentage and standard deviation.

### Instrument

The researchers interviewed executives and community leaders and used questionnaires with four parts as a research tool, which had:

Part 1: Personal Data

Part 2: Factors of behavior for using digital channels

Part 3: The potential for marketing on the Internet

Part 4: Recommendations and guidelines for the potential of OTOP entrepreneurs

## Data Collection

The researchers used questionnaires for collecting the data from OTOP entrepreneurs. Then, the data collected were analyzed by descriptive analysis.

## Analysis of the data

The researchers used descriptive statistics analysis to determine characteristic of distribution in each variable by using basic statistics, for example, the percentage, frequency, mean, and standard deviation.

## RESULTS

**From Table 1**, the mean level of significance of contributing factors to the digital marketing potential for OTOP entrepreneurs, for the knowledge and skills variables, were 2.92 or 58.42% from a full score of 5 and had a moderate level of satisfaction. When considering each item from descending, there were two topics that got high levels of importance; the importance of knowledge and skills about Ban Tam Glong (mean = 4.10 or 82%) and the importance of knowledge and understanding about the provincial OTOP sales (mean = 3.80 or 76%). Then the researchers found that there were two topics that had a moderate level of satisfaction; the level of importance of competence / communication skills to influence tourists / customers (mean = 2.93 or 58.67%) and the importance of going out to see other Ban Tam Glong in different areas (mean = 2.63 or 52.67%). Finally, at least four topics had less level of satisfaction; the importance of going out to see other Ban Tam Glong in the same area (mean = 2.60 or 52%), the level of importance of knowledge about the Internet and the website (mean= 2.57 or 51.33%), the level of importance of computer skills (mean = 2.50 or 50%), and the level of significance of proficiency / skills in English (mean = 2.23 or 44.67%).

**TABLE 1.** The level of significance of contributing factors to the digital marketing potential for OTOP entrepreneurs. (Knowledge and skills)

| Variables / Indicators                                                                          | $\bar{X}$   | SD.         | Level         |
|-------------------------------------------------------------------------------------------------|-------------|-------------|---------------|
| *The importance of knowledge and understanding about the provincial OTOP sales                  | 3.80        | 0.92        | High          |
| *The importance of knowledge and understanding about Ban Tam Glong                              | 4.10        | 0.88        | High          |
| *The level of proficiency / skills in English                                                   | 2.23        | 1.41        | Less          |
| *The level of importance of competence / communication skills to influence tourists / customers | 2.93        | 1.28        | Medium        |
| * Level of computer skills                                                                      | 2.50        | 1.43        | Less          |
| * The level of importance of knowledge about the Internet and the website                       | 2.57        | 1.43        | Less          |
| * The importance of going out to see other Ban Tam Glong in the same area                       | 2.60        | 1.28        | Less          |
| * The importance of going out to see other Ban Tam Glong in different areas                     | 2.63        | 1.47        | Medium        |
| <b>Total</b>                                                                                    | <b>2.92</b> | <b>1.26</b> | <b>Medium</b> |

**From Table 2,** The researchers found that the mean level of significance of contributing factors to the digital marketing potential for OTOP entrepreneurs, for the environmental factors were 3.58 or 71.61% from a full score of 5 and the level of satisfaction was at high level. When considering each item from descending, there were 11 topics that got high level of satisfaction; the level of importance of the priority level of Ban Tam Glong is decorated and has its own identity (mean = 3.80 or 76%), the level of importance of integration is a community network of tourism and Ban Tam Glong (mean = 3.77 or 75.33%), the significance of the location of the priority of the location Ban Tam Glong is nearby the famous tourist site (mean = 3.70 or 74%), the level of importance of the importance of Ban Tam Glong had a majority of customers who were working-age customers (mean = 3.70 or 74%), the level of importance of the higher the level of competition in Tam Glong business (mean = 3.63 or 72.67%), the importance of social web sites such as Facebook (mean = 3.57 or 71.33%), the priority of sales and direct contact with customers without intermediaries or sales representatives (mean = 3.57, or 71.33%), the level of importance of the priority of selling and contacting customers through intermediaries and sales representatives (mean = 3.53 or 70.67%), the level of significance of the role of the government agency at the district level (mean = 3.50 or 70%), the significance of the training organized by the Tourism Authority of Thailand (mean = 3.47 or 69.33%). Finally, the researchers found that only one topic that got medium level of satisfaction which was the level of importance of having your own website (mean = 3.20 or 64.00%).

**TABLE 2.** The level of significance of contributing factors to the digital marketing potential for OTOP entrepreneurs. (Environmental factors)

| <b>Variables / Indicators</b>                                                                            | <b><math>\bar{X}</math></b> | <b>SD.</b>  | <b>Level</b> |
|----------------------------------------------------------------------------------------------------------|-----------------------------|-------------|--------------|
| *The level of importance of integration is a community network of tourism and Ban Tam Glong              | 3.77                        | 1.10        | High         |
| *The level of importance of the role of the government agency at the district level                      | 3.50                        | 1.25        | High         |
| * The level of importance of the training organized by the Tourism Authority of Thailand                 | 3.47                        | 1.04        | High         |
| *The priority of sales and direct contact with customers without intermediaries or sales representatives | 3.57                        | 1.14        | High         |
| * The priority of selling and contacting customers through intermediaries and sales representatives      | 3.53                        | 0.78        | High         |
| *The higher the level of competition in Tam Glong business                                               | 3.63                        | 1.03        | High         |
| *The importance of social web sites such as Facebook                                                     | 3.57                        | 1.30        | High         |
| *The importance of having your own website                                                               | 3.20                        | 1.49        | Medium       |
| *The priority of the location Ban Tam Glong is nearby the famous tourist site                            | 3.70                        | 0.99        | High         |
| *The priority level of Ban Tam Glong is decorated and has its own identity                               | 3.80                        | 0.92        | High         |
| *The level of importance of Ban Tam Glong has activities to do                                           | 3.53                        | 1.33        | High         |
| *The importance of Ban Tam Glong has a majority of customers who are working-age customers               | 3.70                        | 0.99        | High         |
| <b>Total</b>                                                                                             | <b>3.58</b>                 | <b>1.11</b> | <b>High</b>  |

## **DISCUSSION AND CONCLUSION**

The participants were OTOP entrepreneurs in Ban Tam Glong Village in Tambon Ekkarat, Amphoe Pa Mok, Ang Thong province. The researchers found that 22 participants (73.30% of all population) used the internet at home and 8 participants (26.70%) did not use the Internet at home. For the period of internet usage at home, 9 participants (30%) used internet less than 1 hour, 8 persons (26.70%) used internet 2-3 hours, 7 participants (23.30%) used internet 1-2 hours, and 6 participants (20%) used internet more than 3 hours. These results relevant to Malinee Kumkrua and Teerapun Chokudomchai research (2019). For the number of internet use at home, 9 participants (30%) used internet 1-2 times per day, 8 participants used internet 2-3 times per day (26.70%), 7 participants (23.30%) used internet more than 4 times per day, and 6 participants (20%) used internet 3-4 times per day. The most targeted use of the internet was searching for general knowledge, accounting for 21 participants (70%). The others use internet for checking Facebook (18 participants or 60%), contacting or online shopping (18 participants or 60%), learning their business (14 participants or 46.70%), finding the entertainment (9 participants or 30%), finding educational information (5 participants or 16.70%), and other purposes (2 participants or 6.70%). These results relevant to Thanakarn Lertsudwichai research (2019).

## **SUGGESTIONS**

1. Technology plays a role in all fields today. OTOP entrepreneurs should have knowledge to adapt and increase business potential.
2. Ekkarat Subdistrict Administrative Organization and Government agencies should be involved in managing OTOP entrepreneurs' digital media.
3. Building a brand is not just designing a logo. The right strategy is critical to creating long-term brand equity and sustainable business growth.
4. The brand must communicate and listen carefully to connect with consumers. When relationship is successfully established between a brand and a consumer, the consumer becomes an asset to the brand.
5. Creativity is not just being artistic. It must be creative in the right idea that works at the right time and place, in the right tone and right way.

Finally, researchers should visit the field for further research to find out how the community get supports.

## **ACKNOWLEDGEMENT**

This research was funded by Sarawut Phaopayak (President of Administrative Organization Ekkarat Subdistrict Pa Mok District Ang Thong Province)

On behalf of us, we would like to express our sincere gratitude to Assoc.Prof. Dr. Siriyupa Poonsuwan and Dr. Kwanjai Jariyatakone who have been very supportive during the period of our project work.

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# **A STUDY OF STUDENT MISBEHAVIOR DURING THE COVID-19 PANDEMIC: A CASE STUDY OF CHINESE CLASSES**

by

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## **ABSTRACT**

The Covid-19 pandemic crisis had directly impacted the living habits of many people around the globe, not even an education that has to be switched to online learning instead. The transition from classroom to online teaching has had an impact. Teachers need to find out and use various platforms to help in the smooth running of their classes. However, this change may bring about student misbehavior in the classroom. Therefore, the purpose of this article is to look into students' inappropriate online learning behavior by using forty students of Chinese classes as a case study. As a result, there were three main misbehaviors: 1) seeking unallowed assistance; 2) sleeping and multitasking while studying; 3) lacking communication manners. The author analyzed and made suggestions for improvement such as designing exercises that allow students to apply what they have learned in class, using a different tone of voice to catch students' attention, and using LINE Official account to help in replying students when outside of working hours.

**KEY WORDS:** Student misbehavior, Inappropriate Behavior in Classroom, Inappropriate Online Learning Behavior, Online Learning, Chinese Class



## INTRODUCTION

In the wake of the global pandemic of Covid-19, all higher education institutions throughout the world are struggling with the same dilemma of developing ways to support students online. The Covid-19 pandemic crisis has required most education systems to seek alternatives to face-to-face teaching and learning. Many education systems transferred activities online to ensure that instruction could continue even if education institutions were closed.

By reason of the transition in teaching and learning to online class, both teachers and students must adjust their roles to the circumstances. Teachers need to discover, evaluate and implement various platforms, such as ZOOM, Google Meet, Google Classroom, Microsoft Team, LMS system, etc., to design course outline and help in the smooth running of their classes, including the design of activities and measurements in the online class to be appropriate and effective. However, teachers can deliver lessons to students more efficiently through online learning. They can use several online tools such as videos, PDFs, and podcasts as part of their lesson planning and preparation. In terms of students, there are several significant advantages of transferring online learning: 1) online learning offers students the accessibility of time and place in education. They are able to attend classroom through the online platform almost 100% from any location of their choice; 2) online learning alleviates the cost of students' expenses such as dormitory, off-campus entertainment, transportation, and other living expenses; 3) students can access video recordings of previous lessons at any time.

Although online learning is advantageous towards teachers and especially with students, it might lead to misunderstandings or inappropriate behavior of students in online classrooms. In this study, students' inappropriate behaviors are learning behaviors that arise as a result of switching from face-to-face classroom learning to online learning. The inappropriate behaviors might be indicative of immaturity, irritation, or thoughtlessness. These are negative behaviors that can affect student performance, interactions, as well as relationships with instructors and peers.

The author investigated students' inappropriate online learning behavior by using Elementary Business Chinese and Fundamental Chinese for Personnel in Tourism and Hospitality Industry II's students as a case study. After analysis and applying, the author made some suggestions for further improvement as well.

## RESEARCH OBJECTIVE

1. To look into students' learning behavior after switching to online learning and find out if any inappropriate behaviors occur during online learning.
2. To investigate the causes and propose a solution to the problem of inappropriate behavior in online learning among students.

## **LITERATURE REVIEW**

The following section will refer to the study of students' inappropriate behavior after switching to online learning.

Rachel and Daniel (2012) used individual interviews to investigate perceptions of classroom misbehavior among secondary school students in Hong Kong. Disrespecting the teacher, task avoidance, non-attentiveness, napping, and failing to deliver homework on a regular basis were among the students' inappropriate behavior. According to the findings, student classroom misbehaviors involved rule-breaking, breaching implicit norms or expectations, and disrupting the teacher-student connection in the classroom.

Lili and Scott Titsworth (2015) investigated and explored the relationship between student online misbehaviors and various classroom communication processes and outcomes through two studies. The first study used exploratory factor analysis to inductively generate initial student online misbehavior typologies and verify factor structure. The second study explored relationships between students' perception of their online misbehaviors, perceived learning, and other demographic factors, using confirmatory factor analysis to determine model fit. Finding inappropriate assistance, internet slacking, aggressiveness and lack of communication were identified to be four factors on the student online misbehavior scale. It was determined that the data was reliable and accurate. The results reveal that certain demographics were related to perceptions of use and the degree of student online misbehavior; however, student online misbehavior was only marginally related to students' perceptions of learning.

From above, it can be seen the misbehavior among students in online learning is almost similar. The cause of these behaviors is divided into two factors: 1) learning platform changing; 2) a lack of awareness of inappropriate behaviors. So how do teachers manage their classrooms and raise awareness of their students?

## **THE METHODOLOGY**

### **Participants**

Students in the experimental group were divided into two groups: A group is second-year students in Elementary Business Chinese class, aged 18-20, with a total of twenty students. B group is second-year students in Fundamental Chinese for Personnel in Tourism and Hospitality Industry II, aged 18-20, with a total of twenty students. Both groups A and B are students that the author is in charge of online teaching in the second semester of academic year 2020. They learned Chinese in different contexts and language levels. And because of the differences between the two subjects, students' online learning misbehavior may differ.

### **Analysis Process**

In order to investigate, understand, and improve what actually happened inside the online classroom, the Classroom Action Research (CAR) was adopted as the approach of this study. As a case study, the authors used forty students from Elementary Business Chinese class and Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class.

The experiment and observation were divided into three phases during the online course based on qualitative research. The study will last 16 weeks during the second semester. The first phase consisted of seven weeks of observation and study of the students' online learning behavior. The second phase lasted for two weeks after the observation period ended to analyze the causes of inappropriate online learning behavior by using individual interviews. The third phase, which lasted seven weeks, was about applying the solution to the test.

## RESULTS

During the first seven weeks of online learning in the Elementary Business Chinese Class and Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class, there were three main inappropriate behaviors in online learning: 1) seeking unallowed assistance; 2) sleeping and multitasking while studying; 3) lacking communication manners. See the following details:

**TABLE 1.** Misbehavior of Chinese Class Students in Online Learning

| Online learning misbehavior              | Group A | Group B | Total amount of students |
|------------------------------------------|---------|---------|--------------------------|
| Seeking unallowed assistance             | 9       | 4       | 13                       |
| Sleeping and multitasking while studying | 0       | 13      | 13                       |
| Lacking communication manners            | 9       | 2       | 11                       |

*Note:* Group A students are enrolled in an Elementary Business Chinese class, whereas Group B students are enrolled in a Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class.

According to the table above, there were thirteen students had seeking unallowed assistance behavior (nine students of group A and four students of group B); thirteen students had sleeping and multitasking while studying behavior (thirteen students were all group B); eleven students had lacking communication manners (nine students of group A, and two students of group B).

### 1. Seeking unallowed assistance

Regarding seek unallowed assistance behavior, which is commonly seen in classroom exercises such as making a sentence. Students used the Google platform to search and duplicate Chinese sentences. The table revealed that Elementary Business Chinese class had a higher number of students duplicated their assignment than students in the Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class. What are the factors of this gap?

After individual interviewing and collecting information, group A students thought making a sentence was way too difficult for them. Some of vocabulary words, especially business vocabulary in the lesson, were tough for them. By the way, they were not accurate in terms of word usage and grammatical structures, so they had to spend more time on exer-

cises and more likely to make errors in the sentence. As a result, they adopted a way to duplicate sentences from the Internet in order to save time and reduce errors in doing exercises, whereas group B students thought vocabulary in their lesson was acceptable. Sleeping during study and classroom activity periods was one of the factors that encouraged some students to use copying ways of completing exercises. Moreover, some students lost their focus while studying, so they were unable to complete the exercise by themselves.

**TABLE 2.** The cause of seeking unallowed assistance behavior

| The causes of misbehavior                                   | Group A | Group B | Total amount of students |
|-------------------------------------------------------------|---------|---------|--------------------------|
| The difficulties in vocabulary usage and sentence structure | 9       | 0       | 9                        |
| Sleeping during study and classroom activity periods        | 0       | 2       | 2                        |
| Losing attention in class                                   | 0       | 2       | 2                        |

*Note:* Group A students are enrolled in an Elementary Business Chinese class, whereas Group B students are enrolled in a Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class.

## 2. Sleeping and multitasking while studying

This is the most common types of misbehavior looked like: 1) After attending to the classroom and greeting to teacher at roll call, they muted themselves, turned off their camera, and then went back to sleep (founded six of thirteen students); 2) After attending the classroom and muting themselves, they did something else or went somewhere else until teacher called on them. Then they promptly unmuted, responded to the question, and then muted themselves again (founded seven of thirteen students).

However, why are these behaviors restricted to students in Group B? The individual interview of thirteen students showed that they thought the lesson of Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class was not too difficult. The content of the lessons is mostly about Chinese in daily life. Moreover, they also did not expect the teacher would call them to read aloud or answer the questions in the class. In the Elementary Business Chinese class, however, teacher assigned students to preview lesson before class. If not, they will not be able to answer the questions and will lose points. As a result, students in group A are less likely to have these behaviors.

**TABLE 3.** The classification of sleeping and multitasking during studying behavior

| Types of misbehavior                                      | Group A | Group B | Total amount of students |
|-----------------------------------------------------------|---------|---------|--------------------------|
| Going back to sleep after attending to the classroom      | 0       | 6       | 6                        |
| Going out somewhere else after attending to the classroom | 0       | 7       | 7                        |

*Note:* Group A students are enrolled in an Elementary Business Chinese class, whereas Group B students are enrolled in a Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class.

### 3. Lacking communication manners

With the development of technology and online communication platform, this misbehavior has become more frequent in recent decades. Teachers and students can communicate and connect through class group chat in LINE. Therefore, it led most students to prefer contacting teachers by LINE than the others. The most common behaviors among both A and B groups are: 1) Sending a Line message to a teacher outside business hours (from 8 pm to midnight); 2) The students had a habit of posting questions before considering. When having a question, most students preferred to type it without examining to see if the teacher has already explained anything.

**TABLE 4.** The common types of lacking communication manners behavior

| Types of misbehavior                                                     | Group A | Group B | Total amount of students |
|--------------------------------------------------------------------------|---------|---------|--------------------------|
| Sending LINE messages to teacher during outside business hours           | 6       | 2       | 8                        |
| Posting every question to teacher via LINE without having an examination | 3       | 0       | 3                        |

*Note:* Group A students are enrolled in an Elementary Business Chinese class, whereas Group B students are enrolled in a Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class.

Through the individual interviews, four students from group A mentioned a desire to leave a message for the teacher to see the next day. Two students claimed there was an urgent question related to class assignments need to be explained and supported. Three others were familiar with using LINE to chat with friends. Therefore, they did not consider whether it was proper to leave the message during outside business hours. The other two students from group B claimed there was a serious concern that needed to be informed to the teacher. Moreover, the students who usually posted questions to teachers via LINE first without having an examination, some confessed that they generally posted questions to teachers because they did not pay attention enough in class, and some thought that posting questions via LINE would be more convenient and allowed them to receive a response sooner.

| The cause of misbehavior                                                    | Group A | Group B | Total amount of students |
|-----------------------------------------------------------------------------|---------|---------|--------------------------|
| Wanting to leave a message for teacher to see the next day                  | 4       | 2       | 6                        |
| Asking question related to class assignment                                 | 2       | 0       | 2                        |
| Getting used to send message or chat via LINE after outside of-office hours | 3       | 0       | 3                        |

*Note:* Group A students are enrolled in an Elementary Business Chinese class, whereas Group B students are enrolled in a Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class.

According to the above observations and individual interviews, here are some pieces of advice for improvement.

### 1. Create activities or exercises to help students improve their analytical thinking skills.

Teachers can consider creating exercises that allow students to analyze or apply what they have learned in class rather than duplicating from a website. After the first seven weeks of the experiment, the author created and added complete dialogue and sentence exercises and swapped making sentence exercises to the classroom for Q&A and the examination instead.

After seven weeks, the number of students who had copied and pasted behavior decreased. Students were increasingly seeking support and guidance on how to improve their language skills.

### 2. Make students interactive in class

Creating activities that all students can participate in is not only engages students' attention, but also makes the classroom more motivating, entertaining, and educational for both teachers and students.

In the Fundamental Chinese for Personnel in Tourism and Hospitality Industry II class, the most topic was about Chinese in daily life. Thus, the author engaged students' interests and built them into the learning process. Such as, let students used Chinese words to talk about their favorite artists, movies, or hobbies. By the way, the author also allowed students to write down or select the answers on slides or whiteboards in ZOOM platform.

Furthermore, the rise and fall of volumes can help all students maintain attention, even though it is especially effective for college students. During an Elementary Business Chinese lesson, the author used different voices and volumes to peak interest. Besides, the author also used group work to give students a break from solo bookwork, and share ideas or discuss the topic. As a result, students were more active in the classroom and less multitasking while studying.

### 3. Create LINE Official Account for contact

As the author mentioned before, most students preferred to contact teachers via LINE, but LINE still did not support auto-reply message. How teachers supposed to do when student keep communicating with them during outside of working hours? The author created a LINE Official account, set auto-reply function, and added this account into the class's group chat. The auto-reply message is a helpful way to remind students to contact teachers during office hours and think carefully before posting a question. After informing students to communicate to the author via LINE Official instead of Line personal account, students will receive auto-reply messages once they contacted me outside of working hours. They learned and better themselves and be more careful in dealing with the author. Moreover, the auto-reply function in LINE Official can help teacher screen whether those messages were a serious concern.

## CONCLUSION AND RECOMMENDATION

In conclusion, student misbehavior can be classified into three main categories: 1) seeking unallowed assistance; 2) sleeping and multitasking while studying; 3) Lacking communication manners. After comparing the two groups of students' inappropriate online learning behavior, it can seem that some behaviors, such as sleeping and multitasking while studying, have been seen in group B students only. Based on the data collection and analysis, the authors hypothesized this was probably because of the differences in content and course design in each class. Group A students were instructed in a content-based manner. The teaching approach emphasized case analysis and group discussion. As a result, not all students were able to lose focus or do anything else during their studies, whereas group B students were a language course, which emphasized language and communication, thus students can use this gap to do other things while studying. Moreover, it was found that the students who showed the same misbehavior had different factors cause by this. Therefore, we may conclude that students' inappropriate behavior can be shown in different ways depend on subject context and related environment.

In this study, the author used a small group of Chinese class students as a study group. There is a possibility that there may be a wider variety of inappropriate behaviors that have not yet been found. This study not only shows us of the complex nature of student misbehaviors, but also shows us the related factors and themes underlying the misbehavior of students. To follow the misbehaviors further, we can use a large group of students to investigate more inappropriate behavior during online learning and discover all factors and causes of misbehavior of students. As well as, design an effective online learning model to encourage students improve themselves and build appropriate behavior in online learning. There are many possibilities for us to continue further research into this issue and appreciate the relevance and difficulties it brings to online learning.

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# CREATING HEALING SPACES: READING FROM THE LENS OF THE ANCIENT SACRED TEXTS

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## ABSTRACT

In times of uncertainty, religions strive to attain some reflective insight, comfort, and motivation from their ancient texts and traditions. Aspects of global human responsibility, the meaning or cause of disease and suffering, and the need for God's comfort and rescue are highlighted amid these challenging times. Nonetheless, there have been little comprehensive work that gathers the outlook of various religion regarding healing and sickness. This paper looks into the concept of disease, its causes, the concept of healing and the practice undertaken by the religion of Buddhism, Hinduism, Islam and Christianity. Using qualitative research, ancient texts from each religious traditions are explored and analyzed to answer these main themes. Other resources such as printed articles and published journals from the World Wide Web are also used for richer understanding of the sacred texts. The findings indicate that the concept of sickness and their causes are mostly similar among the four religions. However, the concept of healing and the undertaken practices are distinctive, in relation to their sacred texts and beliefs. In conclusion, while the perception that religion is an immature response to calamities remains, people still come to their religion for comfort. Compiling excerpts from these sacred texts hope to reconnect medical practices to religious faith and overall, strengthen healing as a personal responsibility. It is further recommended to look deeper into the concept of mental health and peacebuilding from the psycho-social viewpoint caused by the trauma of the pandemic.

**KEY WORDS:** Health and healing, Bible, Qur'an, Bhagavad Gita, Majima Nikaya, Anguttara Nikaya

## INTRODUCTION

Currently, the world confronts an incomparable global medical emergency in modern history - the COVID-19 pandemic. By 11th of March 2020, the World Health Organization (WHO) declared COVID-19 a pandemic which had spread to over 110 countries and territories around the world (Ducharme 2020). A pandemic is defined as an epidemic occurring worldwide at a given time, wide coverage of the disease geographically, crossing international boundaries and usually affecting greater amount of the population (Kelly, 2011). The pandemic has been devastating societies all over the globe, traumatizing people, with the quest for answers more often connected to religion. This has been true of the major pandemics that the world has ever faced like the Black Death, Spanish flu, and HIV/AIDS (Cunningham, 2008). Therefore, the inseparable and complex relationships between religion and pandemics have existed for centuries. Along with the convenience of biomedical explanations, different religions have developed principles, philosophies and even practices to provide clarifications to emerging social problems like diseases. Faith communities, church organizations, and religious leaders can play a major role in saving lives related to the pandemic. They are the primary source of assistance for food and basic needs, comfort, counseling, and social services for the communities they serve (WHO, 2020). Aside from pastoral and spiritual encouragement during the crisis, religious institutions can motivate their communities to take steps to manage their stress, and to keep the faith, channeling healing during such times of seclusion, separation, fear, and ambiguity. The task of creating healing spaces (mind, body and soul) for the affected communities are heightened during the pandemic. Each religious institution became crucial in an attempt to seek explanations and stress relief; however, I have not found a study directly addressing healing perspectives from the lens of the different ancient sacred texts and finding commonalities of principles from it. This study contributes to this gap. This work will explore the perspective of healing from the ancient sacred texts and reflections from scriptural review from their vantage point as faith practitioners. Thus, my research questions are the following:

1. Using the sacred texts, what do Muslims, Buddhists, Christians, and Hindus reflect on diseases and its causes?
2. What is health and healing from the perspective of different ancient sacred texts?
3. As faith practitioners, how can they respond to the pandemic in practical ways utilizing the resources from their faith traditions?

The purpose of this study is to find an alternative paradigm for understanding the concepts of health and healing by examining the ancient sacred texts.

The framework here sets out to discover a model from the data systematically obtained and analyzed using comparative analysis. Is there a standard way of “healing” regardless of any given religious or spiritual tradition? Or are there many ways of “healings” cross – referencing many religions and spiritualities? Hackett (2005) states that experiences of healing are expressed in embodiment, yet the appearance, as well as the result and responses to healing (i.e., Christian prayer) may differ one from the other. This supports the “multifaith collaboration approach” which view each faith as distinct and valuable in its own right (Garred and Abu-Nimer, 2018). This approach sees important common values across numerous faith traditions such as wholeness, peace, healing and compassion. The

approach supports religious freedom and acknowledge diversity, collaborating different faiths to work together for the common good, which is a central value in all faiths and therefore, a core principle in interreligious peacebuilding (ibid. p.3). Regardless of the nature and scope of the joint work, whether it is helping in the relief program for the jobless people during the pandemic or assisting in the hospital in accommodating COVID patients or psycho-social care, the important factor is the collaboration for creating a constant connection between religiously diverse person and groups (ibid. p.3).

As such, this paper contributes to the spiritual health and healing literature from various religious perspective, in the lens of their ancient sacred text, with the potential to shape peace for those affected by the pandemic. The paper also provides a comprehensive overview about illness, healing and practices from various religions, which can illuminate future endeavors in interreligious activities.

The scope of the study focuses on theme of healing from five major sacred texts: The Bible of Christianity; The Qur'an of Islam, The Bhagavhad Gita of Hinduism, and the Majjima Nikaya and Anggutara Nikaya of Buddhism. The paper will not discuss other themes unrelated to health and healing. Other religious tradition not mentioned in this text such as Taoism, Confucianism, Shintoism and other faith expressions are excluded.

## RESEARCH METHODOLOGY

Using a qualitative research design, this research utilizes an in-depth review of the ancient sacred text of different religious traditions to yield an inductively generated grounded theory. The primary sources to study are the ancient religious scriptures and these are the following: The *Bible* of Christianity, The *Qur'an* of Islam, The *Anggutara Nikaya*; *Majjima Nikaya* of Buddhism, and The *Bhagavad Gita* of Hinduism. The concept of sickness, health and healing are the main themes to explore from these sacred texts. Religious leaders of various faiths have been consulted on the proper exegesis of the sacred text and how to properly quote the book/s, chapter/s, and verse/s for academic purpose. Since the sacred text were written in the ancient times, I am aware of the histo-sociocultural context surrounding the book therefore as an academic theologian, I consulted too, some theological scholars to seek guidance on how to properly exegete the texts from different faith traditions. Secondary sources will be utilized such as literature reviews available in the library and World Wide Web, and print articles and published journals related to the study.

## FINDINGS

### **A.The Diseases and its Causes from the Lens of the Ancient Sacred Texts *From Majjima Nikaya and Anguttara Nikaya of Buddhism***

An examination of Buddhist principles and perspectives on health and healing from the sacred texts offers an alternative insight for understanding health and illness that may lead to other approaches for managing or solving health problems

*“Monks, there are these two diseases. What two? Disease of body and disease of mind.”*  
*“Monks, there are these two offerings. What two? The Carnal and the Spiritual”*  
 (AN.II. 143 )<sup>31</sup>

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<sup>31</sup> Two versions/ translations I found in Anguttara Nikaya, Book of Twos, Suttas 143.

For the bodily diseases, Buddhist principles are closer to today's meaning of health and diseases which embrace both physical and mental health. The disease of the mind or mental disease (spiritual) is a very important issue in Buddhism for mental disease involves all kinds of sufferings. The Lord Buddha has said:

*"Monks, there are to be seen beings who can admit freedom from suffering from bodily disease for one year, for two years, for three, four, five, ten, twenty, thirty, forty, fifty years: who can admit freedom from bodily disease for even a hundred years. But, monks, those beings are hard to find in the world who can admit freedom from mental disease even for one moment, save only those in whom the āsavas [defilements] are destroyed."*  
(AN book of Twos; Suttas 143)<sup>32</sup>

Pleasurable feelings are also interpreted as diseases if they contain some of the defilement or impurities. (Wichit & Luechai, 2002). Wichit and Luechai (2002) quoted the work of Phra Prayudh Payutto, (1995), which identifies three components of defilement that cause diseases namely: greed, hatred and delusion. Though the purging of defilements cannot directly cure physical diseases, it lessens the physical or mental pain and suffering. (Ibid., p.97) Physical ailments or death are only one part of our diseases or sufferings. Except for the Enlightened Ones (arahants), all beings have one or more diseases. This does not mean that "the arahants are free from all physical diseases or do not have any pain, but all of those ailments cannot disturb his/her mind or cannot be any more causes of their suffering" (Ibid. p.97) For physical understanding of health, "effects of microorganisms, chemical agents, the degeneration of organs, and other environmental factors", are the only material or detectable causes of diseases. From a Buddhist view however, causes of diseases are not only these detectable etiologies, but also karmas and other undetectable beings. Non-human beings such as a demon (yakkha) and ghosts are also the causes of illness." (Ibid., p.98).

### ***From the Bhagavad Gita of Hinduism***

The Bhagavad Gita does not explicitly discuss on diseases or illnesses but more on the suffering of humans. According to the Bhagavad Gita - like the diseases, the human suffering is real, but temporary. Ananda (2020), who is studying the Vedic religions for the last 25 years discusses categories of suffering which are: suffering imposed by our mind and body like cancer, body pain and others; suffering imposed by other beings such as the spread of disease due to bacteria and viruses; and suffering imposed by natural causes such as floods, drought, tsunami, and the like. Suffering is produced due to our faulty thinking, perceptions, views and attitudes. It begins with our physical birth, continues on with old age and temporary stops with the death of the current substantial body (ibid.)

*"Know that the mode of Darkness, born of ignorance, is the delusion of all embodied living entities. The results of this mode are madness, indolence and sleep, which bind the conditioned soul. The mode of Goodness conditions one to happiness; Passion conditions one to fruit producing action & pain; and Ignorance, covering one's knowledge, binds one to madness."*

-Bhagavad Gita 14: 8-9

The Bhagavad Gita takes the fact that people do suffer and that this suffering is a result of accepting a substantial body. This emphasized that we are the body and the mind - physical and mental beings which are subject to the process of births and deaths, and we suffer from many fears and anxieties (Whitman, 2007). In a spiritual body, there is no suffering. Achieving that spiritual body, while having our current material body is the whole plan of human life (ibid.). The suffering which is both mental and physical is thought to be part of

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<sup>32</sup> Wichit and Luechai (2002). P. 97 Quoted from Phra Dhammapiaka (P. A. Payutto). (1999). Modern medicine in Buddhist perspectives. (2nd edition) Bangkok: Wuddhidhamma Fund. (In Thai).

the unfolding karma and is the consequence of the inappropriate actions either in current life or the past life (ibid.). While we are paying attention to our physical wellness, at the same time, we have to pay attention to that which resides within our bodies from which we can seek the permanence – peace, inward harmony and courage. We must have a vision and attitude that go beyond our physical concerns and this particular existence.

### ***From the Qur'an of Islam***

One of the causes of diseases and troubles mentioned in the Holy Qur'an is the involvement of human beings in evil deeds and sins. The Qur'an says:

*Undoubtedly, Allah does not do injustice to mankind, but men do injustice to themselves. "*  
(Sura 10: 44)

God Allah does not make people suffer but the suffering is the result of human's own doing. People got into trouble because it is the result of their own actions, thus it draws man back to his humanity and to his Lord.

*"The mischief has appeared in the land and sea, because of the evils earned by the hands of men, so that He may make them taste some of their doings that haply they may turn back. "* (Sura 30: 40)

In Islamic theology, the question of suffering from diseases has always been examined in relation to God's power, human free will, and divine omnipotence however, the emphasis is on human responsibility and obligations in our response to evil and suffering (Iskandarova, 2020). In general, the Qur'anic teachings respond to the dilemma of the existence of evil and suffering in the context of finding a spiritual lesson in every suffering, for a believer needs to be tested in order to discover his/her true essence (Ibid., p.19) Such an approach to suffering inspires believers to foster self-awareness, accountability to self and society, in order to preserve and improve the well-being of others.

### ***From the Bible of Christianity***

The Book of Deuteronomy in the Old Testament sees the link of disease to sufferings of various nature as transgression against the covenant law (Deut. 28: 21-29). Plague is one of the consequences of people's disobedience (Number 16: 49 and 25:9; Numbers 12: 1-10; 2 Kings 5: 25-27; Psalm 38: 3-6; John 5: 13-14; Acts 12:23). It has to be kept in mind that in the prophetic tradition, the transgression of people against cosmic harmony and their suffering is more on communal and national, and not on individual level. Disease on the other hand, is seen as a way for people to become more reliant on God's grace and power (2 Cor. 12: 7-10). In most cases however, it is not possible to say why people suffer from sickness or diseases (John 9: 1-3). God's action after the plague is always a goal for repentance and restoration of His people.

*"When I shut up the heavens so that there is no rain, or command locusts to devour the land or send a plague among my people, if my people, who are called by my name, will humble themselves and pray and seek my face and turn from their wicked ways, then will I hear from heaven and will forgive their sin and will heal their land. "*

- 2 Chronicles 7: 13-14

The appearance of pandemic diseases may or may not be tied to God's specific judgment of sin, but it could also simply be the result of living in a fallen world. There is no way to determine whether or not a pandemic has a specific spiritual cause, but Christians know that God has sovereign control over all things. Disease should be a reminder that life on this earth is fragile, finite, and can be lost at any moment.

## **B.The Concept of Health and Creating Healing Spaces**

### ***From Majima Nikaya and Anguttara Nikaya of Buddhism***

*“Health in its highest meaning is the state of completely free from all suffering that is Nibbana. Health is the highest gain, nibbāna the highest bliss; And of ways, the Eightfold leads to deathlessness, to security.”*

(MN.74 Magandiya Sutta 509)

The scope of health in Buddhism is broader than physical and mental aspects and includes the frame of mind. While this standpoint of health expands our perception of life, it reasons for the vital status of health problems in pursuing a life of wisdom. The passage gives us the insight that health is more than the body, but involves inner maturity as well (Witchit & Luechai, 2002). Good health, under Buddhist principles, is a result of previous good actions starting from last second, last year, or from the last life (Ibid., p.98). This gives us the understanding that good health is an individual responsibility. Healing of diseases is not just about modern and alternative medicine. Everything begins with prevention, as the principle and activities of the eightfold noble path practice (MN 74 Magandiya Sutta 509) shows us. To live in harmony with nature and with less attachment, will lead to a calm mind. That is an important factor for a healthy life.

### ***From the Bhagavad Gita of Hinduism***

The Sanskrit term for health is *Swastha* which has two roots: *sva* means “self” or “soul” and *stha* means “to stand firmly”. Thus, a healthy person is one who dwells with the Self (Gupta, (nd). Ancient wisdom states that in order to have a healthy body, one's mind needs to develop soul consciousness and move away from body consciousness (ibid.).

*That which pervades the entire body you should know to be indestructible. No one is able to destroy the imperishable soul. The material body of the indestructible, immeasurable and eternal living entity is sure to come to an end; therefore, fight, O descendant of Bharata.*

-Bhagavad Gita 2:17

Having attained knowledge of the soul, the question is: how does one attain soul - consciousness? It lies in our understanding of the underlying causes of suffering and then, resolving them effectively through inner transformation. The Bhagavad Gita tells us that this can be achieved by the regular practice of yoga. It is normal for our physical body or mind to be stressed or unwell due to the kind of physical and societal setting in which we live. So, to purify and integrate the mind, body and heart, “one should necessarily perform Yoga, Yajna, charity and meditation” (Mishra & Mishra, 2020). The core of treatment is to encourage balance of physical mental and emotional body by following the right thinking, diet and ideal lifestyle (ibid.)

*One should engage oneself in the practice of yoga with determination and faith and not be deviated from the path. One should abandon, without exception, all*

*material desires born of mental speculation and thus control all the senses on all sides by the mind.*

- Bhagavad Gita 6: 24

Clearly, one's mindset governs the state of one's consciousness. It is important reminder that we harm ourselves with every negative thought that we entertain in our mind. Purities of our thought is linked to our holistic health. *"Serenity of thought, gentleness, silence, self-restraint, and purity of purpose – all these are declared as austerity of the mind"* (Bhagavad Gita 17:16). So, we must cultivate our minds with rich and noble thoughts. Dwelling on positive views is considered a vital requirement for our holistic health and spiritual well-being.

### ***From the Qur'an of Islam***

*"When I am sick, Allah healeth me" (Sura 26:80).*

This verse in the Qur'an refers to God Allah as As-Shafi, "the Healer". Likewise, the word *shifa*, "healing" occurs in different forms in the various verses in the Qur'an (Yucel, 2009).

*"And (Allah) shall heal the breast of the believers" (9:14)*

*"Mankind there has come to you as a guidance from your lord and a healing from the (diseases) in your hearts and for those who believe, a guidance and mercy" (10:57).*

*"And we sent down in the Qur'an such things that have healing and mercy for the believers" (17:82).*

*"There issues from within the bodies of the bee a drink of varying colors wherein is healing for mankind" (16:69).*

Qutb (1976) suggested that healing in the verses above involves both physical and spiritual processes. Healing in this context is spiritual healing except for verse 16:69, wherein the verse refers to the physical process of healing using honey. The spiritual process of healing eliminates worries, greed, enticement, and futility from the hearts of the believers. It can give believers sanctuary, assurance, and patience in the face of adversities and illnesses (ibid). Islam encourages spiritual and outward healing for diseases. According to Qur'anic commentators, these verses ask the believer to take precaution against all diseases (spiritual, physical, or psychological) and to not let the lack of preventative measures cause self-destruction (Ibid).

Prophet Muhammad also made it obligatory for Muslims to seek physical treatment alongside praying for health. In some cases, the Prophet treated an illness with prayer only (Yucel, 2009). Yucel points out that several research studies in the West and Muslim world point to the benefits of praying during illness. Praying during sickness produces physical benefits like "reduced blood-pressure, psychological/emotional benefits such as a decrease in depression and fear, and spiritual benefits such as preparation for death" (ibid. p.232) Muslim scholars maintain that healing involves physical, psychological, and spiritual processes. While they interpret the healing references in the Qur'an and Sunnah differently, the general agreement is that, in order to overcome illness, a person must apply both physical treatment and spiritual strengthening (ibid. p. 233).

### ***From the Bible of Christianity***



In the Old Testament healing is a holistic experience. It must be pointed out, first of all, that health in the biblical sense embraces not only physical well-being, but also the spiritual, mental, and emotional qualities. Health is the “restoration of all relationships, the restoration of shalom” (Van Zyl, 2008). Shalom in the Old Testament is expressing life and well-being. Shalom is a relational term. Every relationship in which a person stands is affected and is disturbed when he is sick thus, sickness is a major threat to the individual’s shalom and consequentially, to the community (ibid., p. 315). To be restored to health is to be saved, not only from agony and possible death, but from all other resulting trails. Health and wholeness in the Old Testament are earthly experiences of salvation; it could be primarily physical (free from affliction); social (free from judgment); communal (free from enemies) or cosmic (free from natural disasters (Ibid. p. 316).

Jesus had an outwardly strong empathy for people suffering from sickness or affliction. Healing was a central activity of Jesus in the Gospels. In fact, Morton Kelsey counted 41 healing stories, many that are repeated in more than one Gospel (Kelsey, 1995). Although many of Jesus’ healings are described individually, there are a number of Gospel verses that describe healings of many people.

*“Those who are well have no need of a physician, but those that are sick.”*  
 -Matthew 9: 12

*“Are any among you suffering? They should pray. Are any cheerful? They should sing songs of praise. Are any among you sick? They should call for the elders of the church and have them pray over them, anointing them with oil in the name of the Lord. The prayer of faith will save the sick, and the Lord will raise them up; and anyone who has committed sins will be forgiven. Therefore, confess your sins to one another, and pray for one another, so that you may be healed.”*

-James 5: 13-16

Healing rites in this passage is discussed in details. This passage from James shows a theological connection between sin and illness, a relationship also found in the OT and Gospels and Acts. Healings were occasionally mentioned as examples of the “deeds of powers” performed by apostles, but it is not discussed very much. The Epistles do, however, contain enough discussion of healing, health, and issues surrounding suffering and adversity to provide a general view of the early Church’s perspectives on these issues. The healing stories served to convey a number of points central to the Christian mission.

### **C. Utilizing the Resources from the Faith Traditions: A Religious Response in this Pandemic**

#### ***Buddhism***

Although sickness and diseases are unwanted conditions, it is not perceived it as useless or bad. If we realize its nature, diseases or illnesses would remind us that our body is delicate and temporary. For Buddhism, awareness of these realities can reduce the attachment in our body. If the person would fully realize that, they have the control to determine their future health status by performing the right ways of living now. Buddhism encourages its followers to take care for their bodies in a proper way. For mental health, we should practice hard and develop ourselves to live with wisdom. Health by any methods aligned with

the Noble Eightfold Path should be promoted. In other words, we harmonize with the law of nature. (Witchit & Luechai, 2002 p.99).

From the Buddhist point of view, the pandemic COVID-19 is the result of our collective karma. It is our willful intentions, the impact of our deeds, it is our common karma and its momentum now spreads with its collective energy (Xiong, 2020). This common karma is often hard to change, but what we can do is to “change our individual karma through self-practice and self-reflection. Buddhists believe that chanting the Buddhist mantras, repentance and forgiveness, compassion and good deeds may help us to decrease the damage that karma may do to us, as we are practicing the Eightfold Path in these actions.” (Ibid., 17).

### **Hinduism**

The Bhagavad Gita are wealthy in insights which builds psychological resilience for individuals at risk, especially in this time of pandemic. The importance of health in the context of the practice of yoga is widely recognized. According to Sharma (2002), the term yoga in the Western context has been almost completely recognized with the physical form of yoga, because of its common appeal as a way of securing and keeping fit the physical and mental health. The Hindu religious tradition, however, associates the word yoga “with the control of the body as well as the mind” (ibid). The path of knowledge (Jnana yoga), the path of action (karma yoga); and the path of meditation (raja yoga) offers a multi-faceted approach to a healthy lifestyle, selfless action and mindful meditation. All of which improves resilience against illness and its severe consequences (Mishra & Mishra, 2020). To save the balance or equilibrium between the mankind and the nature, yoga becomes necessary by the way of the manifestation of the wisdom, concentration, meditation of yogic practices. It uplifts oneself from the selfish interests and give self-awareness to the social welfare (ibid.)

The elements of intelligence, knowledge, forgiveness, truthfulness and freedom from doubt are various positive qualities of living beings which help us to meet the challenges of natural calamities and the pandemic. There is the urgent need in recalibration of these traits (c.f. Bhagavad Gita 10:4-5).

*“He who is temperate in his habits of eating, sleeping, working and recreation can mitigate all sorrows by practicing the yoga system” (Bhagavad Gita 6:17).*

Notably, the practice of healthy diet is being emphasized in the Bhagavad Gita. For a healthy mind, it is essential to have a healthy body (c.f. Bhagavad Gita 17:8). Life of moderation, discipline, and self-control has to be pursued to attain holistic health.

### **Islam**

In Muslim society, individuals will commonly employ conventional medical treatment as well as spiritual remedies. The sufferings and difficulties that befall man are due to his evil deeds, including carelessness. Therefore, it is necessary to follow the teachings of Islam in order to avoid suffering and difficulties. Spiritual precautions can include prayer in the face of stress, anxiety, and depression (Yucel, 2009). Nasir (2020) in his recent work on combatting the Corona virus quoted a statement from Hadith on the observance of quarantine which says:

*“When you find out that there is a plague somewhere, do not go there, and if the plague spreads where you are, do not leave it. “Do not go where the disease is, so if someone goes there, then going there is to put oneself to death and this act is tantamount to committing suicide. But it is also wrong to run away from there.” (Muslim: 2219).*

When the Prophet heard that people in a certain village contracted a contagious disease, he ordered that the villagers stay in the village and those outsiders keep out thus, quarantining the sickness (Nasir, p. 144). The Prophet made seeking treatment obligatory on ill persons. Having such a perspective in mind, many Muslims are exploring strength and resilience within the Islamic tradition. As a collective response to collective suffering, many Muslims respond to COVID-19 by mobilizing their resources to endure difficulties and adjust with supreme competence. Muslims generally take health precautions seriously by following the public health guidelines and seeking treatment when ill. In many narratives, the Prophet Muhammad recommended following hygienic practices (i.e., such as washing hands before and after eating, respecting social distancing, isolating those with contagious diseases, etc.) so they can prevent spread of contagious diseases. (Nasir, p. 143-145).

At the core of collective suffering, there is no doubt that many Muslims consciously use the wisdom of Islamic theology and guidelines to respond to the moral and ethical challenges of COVID-19, addressing physical, emotional and mental health problems with the importance on human accountability and responsibility toward the world.

### **Christianity**

Jesus exemplified love and compassion toward human beings as shown in his healing ministry. He performed miracles of healing regardless of the social status, gender, religion and race. The healing served as evidence that the Kingdom of God has come; an affirmation that of Jesus' authority as Son of God and revelation of God's mighty power in the world.

How should Christian respond to healing especially in this critical time of pandemic? It is simply challenging by looking at opportunities for ministry like what the disciples of Jesus did in early times. A very unique description of the early Christian community is found in Acts. According to Acts 2:44-47 and 4:32-37, the community shared its resources in common. Members sold their possessions and shared the proceeds with the group, according to individuals' needs. “Day by day, as they spent much time together in the temple, they broke bread at home and ate their food with glad and generous heart.” (verse 46). “Now the whole group of those who believed were of one heart and soul, and no one claimed private ownership of any possessions...there was not a needy person among them” (verses 32-34). Members of the community sold their possessions and “laid [the proceeds of what was sold] at the apostles' feet” (verses 32-35). In this time of crises, these wonderful deeds of the early church are worth to follow. It is a holistic form of healing. Jesus further illustrates the Kingdom of God by saying:

*“Come, you who are blessed by my Father; take your inheritance, the kingdom prepared for you since the creation of the world. For I was hungry and you gave me something to eat, I was thirsty and you gave me something to drink. I was a stranger and you invited me in. I needed clothes and you clothed me, I was sick and you look after me; I was in prison and you came to visit me... I tell you the truth, whatever you did for one of the least of these brothers (and sisters) of mine, you did it for me.” - Matthew 25: 34-36, 40*

As demonstrated above, the values of justice, mercy toward the downtrodden, and an all-encompassing love for other humans would continue to guide Christian thought. It is in these principles that have often emphasized approaches to promote health and social justice and peace.

### ***Healing From the Lens of Ancient Sacred Texts***

Human life is so fragile and short; it is easy to get sick and die. This concept is relevant to understanding human nature, and is applicable and true to all religious traditions. As surmised, sickness is simply not just about the physical suffering; it also includes mental and spiritual aspects. Their causes can be the result of internal factors: the person's wrong doing, carelessness, mental illness, physical state, etc. or external factors: pathogenic organisms, poison, natural disasters, community conditions, to even metaphysical topics such as undetectable beings and the karma law.

However, each different religions offer their own distinctive take on healing and the practices directed towards them. In these differences, there arises a similar flow or model on how each religion addresses healing. Self-evident or not, I propose that this model is integrated into each religion's presentation or formulation of their healing practices. This model is strictly not a step-by-step procedure, but rather, it enumerates the necessary ideas when we venture into the concept of healing. Through this model, there exists a cohesiveness between the diagnosed illness and the healing practice, as is the relationship between the problem and its solution.

This model, I divide into four steps; introspection – warning – consequences – solution. First, comes the introspection – wherein the illness might be observed and then, using sacred texts, beliefs or religious tradition, its likely cause is pinpointed. In our modern times, the onset of disease's symptoms are largely consulted to medical authorities. Concomitantly, ponderings about a spiritual reason are still present in the inner mind. Perhaps, humans attach meaning to their affliction as a means of finding some fundamental motivation to overcome it. When the religious texts are consulted, it gave us the two groups of causes: internal and external factors.

Interestingly, attached to these factors is the conception that our "being human" somehow contributes to the disease. To be human after all, entails imperfections and thus, inevitable sufferings. Herein, comes the warning – the sacred texts includes cautionary advices against the abuse of free will or about certain qualities of man (such as carelessness, wickedness, greediness etc.). These are highlighted to work in tandem, aggravate or is related to the condition. By reproaching the individual about these, unhealthy behaviours can be corrected.

Sometimes included in the sacred texts, are illustrations about when the factors and faultiness are prolonged. Illustrations may be stories or proverbs of an individual, a community, or a nation that succumbed into the disease. An illustration serves as a warning against idleness – as it breeds more illness and even death for the individual. The death may not be in a physical sense, but morally, psychologically and even spiritually. A good section of sacred texts may explore these consequences after discussing warning about the human nature and other cause of diseases.

Lastly, having explored those concepts, comes the practices which helps the healing process. Such practices are diverse among world religions, reflecting the unique identity of each world religion. In the table below, it presents the overview of healing practices for each world religion. For Buddhists, to heal is to be freed from suffering and that is to practice the eightfold noble path, disciplining the inner self and mind as well as to accept the karma law. For Hindus, healing involves practicing yoga, self-awareness and watching one's diet. For Muslims, to heal is to strengthen oneself physically and spiritually, which requires devotion to praying, proper hygiene and quarantine practices. Lastly, Christians equates healing as salvation and the restoration of wholeness and peace (shalom) which is bestowed by God's saving power and grace.

While approaches and healing practices from each religion are considered unique in their own right, this proposed model of introspection – warning – consequences – solution may act as a uniting link, in the sense that it is an underlying organization of ideas regarding sickness, healing and their practice. The contribution of this model to the “multifaith collaboration approach” can be reaped once we consider how comprehension of sacred texts can be tedious, especially when certain ideas are bound to be scattered throughout the book. No doubt, during the pandemic some individuals felt spiritual isolation and set out to rediscover their religious traditions and sacred texts. Others may even seek out a new or different religion. The challenge arises in understanding and organizing ideas and as to how specific practices arose in religion. Sickness, healing and peace are commonalities among religions. Such concepts are principal reasons to consider studying and practicing religions worthwhile, especially when it can direct the human condition during the pandemic. By illuminating this model, readers can visualize how most of sacred texts can be dissected and thus, fully grasp the mentality or identity behind the spiritual tradition.

## An Overview of Healing

The summary of the ancient texts analysis is shown in the table below.

| Research Questions               | Majima Nikaya and Anguttara Nikaya (Buddhism)                                                                                                                                                                                                                                                                      | Bhagavad Gita (Hinduism)                                                                                                                                                                                                                                                              | Qur'an (Islam)                                                                                                                                                                   | The Holy Bible (Christianity)                                                                                                                                                                               |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| What is sickness and its causes? | <b>Disease</b> – disease of the body and the mind.<br><b>Causes:</b><br>a) defilements such as greed, hatred and delusion<br>b) collective karma<br>c) Environmental and psychological factors, chemical agents, microorganisms, degenerations of organs, etc..<br>d) undetectable beings such as ghost and demons | <b>Disease</b> - Suffering is equated to a disease (suffering of the mind and body; the material and the spiritual)<br><br><b>Causes:</b> faulty thinking, perceptions, views and attitudes.<br><i>External factors:</i> suffering from diseases of the material body. Karmic actions | The sufferings/ <b>diseases</b> and difficulties that befall man are due to his evil deeds, including carelessness.                                                              | <b>Disease</b> is caused by transgression against cosmic harmony.<br><br>In the OT, it is the consequence of people's disobedience.<br><br>In the NT, reliance of human to God's power and grace.           |
| What is health and healing?      | <b>Health</b> is to be completely free from suffering.<br>Good health is governed by kamma law/ natural law.                                                                                                                                                                                                       | <b>Health</b> - Attainment of soul consciousness through the practice of yoga<br>- having a positive mind.                                                                                                                                                                            | <b>Health</b> involves physical and spiritual processes.<br>>the healer attributed to God Allah<br>Healing must apply physical treatment and spiritual strengthening             | <b>Healing</b> is holistic experience. It is the restoration of all relationship, the restoration of shalom – peace.<br>>restoration to health is salvation.                                                |
| Response                         | >Taking care of the body is the practice of the eightfold noble path.<br>>development not just of physical body but of the inner self and mental discipline.<br>>Acceptance of the <i>kamma/karma law</i> .                                                                                                        | > The practice of meditation, self-awareness and moderation has to be pursued to attain holistic health.<br>> non- attachment to the bodily consciousness<br>> Healthy diet – having a healthy body brings you to a healthy mind.                                                     | > employ conventional medical treatment as well as spiritual remedies.<br>> Prayer, proper hygiene and observing quarantine period as mandated by the Prophet Muhammad in Hadith | >Healing rite such as prayer, visitation anointing, confession, forgiveness, and songs of praise.<br>>opportunities for ministry of action (healing the sick, feeding the hungry, clothing the naked, etc.) |

## **CONCLUSION**

The concept of healing varies in accordance to practiced beliefs based from the ancient texts. Scientific studies have yet to provide substantial empirical proof of their benefits. Regardless, we see a universal truth – healing also involves practicing one’s beliefs wholeheartedly. This becomes especially relevant in these times, wherein withholding communal worship has turned religion into a more personal endeavour. In search of time-tested source of healing, once again religion becomes a source of peace and faith amidst a time of global crisis. These assemblage of ideas from various sacred texts potentially contributes to religious peacebuilding based on multifaith collaboration approach. Generally, the findings across various sacred texts states that health is simply not about the physical body, but also includes mental, social and spiritual health. By being balanced with the cosmic order, natural law or the Divine’s will, man is free from suffering. Accordingly, the approach to healing varies among world religions. However, there underlies a basic mechanism of introspection, warning us against abuse of free will, mitigating the cause of disease and their consequence and finally, to practice acts which restores man’s health. Excerpts about healing, health and sickness reminds us of our relationship with the divine and with others regardless of our faiths and spiritualities. We have the duty to improve ourselves and by doing so, it helps our brethren and the community.

## **RECOMMENDATIONS**

Illness and healing are among humankind’s most fundamental concerns. Sacred texts, beliefs and practices regarding health are naturally prominent in world religions. In this time of pandemic, it is a good opportunity to further study on this perspective: “medical practice on healing from the religious perspective or religious perspective of healing from the point of view of medicine.” Another recommendation would be to study specific practices from a religion and to understand its mentality, the devised model of this paper can be used a framework for analysis.

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# THE IMPACT OF THE COVID-19 ON STOCK EXCHANGE OF THAILAND CASE STUDY IN 2020.

by

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## ABSTRACT

In this paper, the author investigates the impact of COVID-19 in the Stock Exchange of Thailand (SET) by using new COVID-19 cases as the evidence base and Google Trend using the word “coronavirus” which reflects fear of people during the pandemic period. This paper aims to capture risk in the stock market of Thailand at the sectorial level during the COVID-19 pandemic in Thailand by using the traditional Capital Assets Pricing Model (CAPM) and the author also applies Generalize Additive Model (GAM) into CAPM (Time-vary CAPM) to estimate the coefficient in CAPM, which allows the coefficient to fluctuate depending on time and compare the performance of these two models. The author uses daily SET index data, new COVID-19 cases in Thailand, and Google trends in the year 2020. The result show time-vary CAPM has performed better compared with traditional CAPM also COVID-19 pandemic has an increasing market risk premium, but the coefficient of COVID-19 and Google Trend has not affected the SET index. This paper found an increased risk during the 1st outbreak of COVID-19 into Thailand but had a different impact in the different sectors also some period of a study time market risk premium has not affected the SET index, for further study may need more data because this paper analyzes only the first outbreak of COVID-19 to Thailand. This paper can suggest to government and proclaim policy, and also inform investor.

**KEY WORDS:** COVID-19, CAPM, Time-vary coefficient, Stock Exchange of Thailand, Google Trend

## INTRODUCTION

COVID-19 is one of crisis which every country facing and has impact on stock market, in new COVID-19 cases has significant amplify volatility (Albulescu,2020), more volatility in stock means riskier in stock, also confirm cases in each country has strong impact, but number of deaths has weak impact (Ashraf, 2020) also fatality ratio of COVID-19 has a significant and positive impact on volatility (Albulescu,2020). In COVID-19 pandemic period also increasing risk in stock market (Aslam, Mohmand, Ferreira et al,2020).

Thailand relative success in containing COVID-19. But the impact on economic is worst. During March COVID-19 had outbreak into Thailand, number of new cases in Thailand has raised above 180 persons. The impact of increasing on COVID-19 cases makes Stock Exchange of Thailand (SET) index shrink significantly 10percent of the previous day, moreover in sectorial level COVID-19 has impact a lot on AGO&Food, and financial sector, according to Mazur, et al. (2020) found different impact on different sector, also Baek, et al (2020) found COVID- 19 has effect differently in different industry.

Google Trend is other one factor that reflex to behavior and fear of people many studies use “Google Trend” as the main variable in their models to represent the panic. the study of Sharma, M. & Sharma, S. (2020) found that the increase of COVID-19 cases in 8 countries: The United States, Spain, Italy, France, the United Kingdom, China, Iran, and India, can be reflected by the growing of “Google Trend”. In the end, this study concluded that the fear and concern of people on COVID19 have been well reflected on the Google Trend, so this paper applied Google Trend to analyze weather its effect on SET index or not, based on evidence that Bijl et al. (2016) found the relationship between Google Search Volume (GSV) and stock return and GSV can predict stock return, but the relationship is change over time,

The popular measure risk model in financial is Capital Assets Pricing Model (CAPM), (sharp,1964), it is worldwide model which 75 percent finance professor recommend using CAPM for estimate cost of capital for capital budgeting (Welch, 2008), also survey found 73.5 percent of chief financial officer use CAPM indicates (Graham and Harvey, 2001). CAPM allow to predict the relationship between risk of security and expected return (Bodie et al.,2014).

The alternative approach, this paper applies Time-vary coefficient autoregressive model by using Genialized Additive Model (GAM) which can apply to daily time-trend data. The benefit from time-vary approach is allowing parameter changing over time. GAM has firstly used in phycological area (Bringman et al.,2016), whereas Hongsakulvasu and Liamukda (2017) used GAM to analyze stock market.

This paper provides the empirical study result of applying traditional CAPM and time-vary coefficient CAPM to eight sector of Stock Exchange of Thailand which are financial, industrial, AGRO, service technology, property, resources, and consumer sector with daily data from 1st January 2020 to 31st December 2020. This paper contains 6 part first is introduction, Review of literature, Method, Result Discussion and Recommendation.

## OBJECTIVE

This research aims to compare result of traditional model and alternative approach and find risk in Stock Exchange of Thailand during COVID-19 pandemic in 2020 using alternative approach to capture adjustable risk, in addition it informs government to make decision on making policy.

## REVIEW OF LITERATURE

In 2020 COVID-19 made impact on many areas and one of them is financial market many studies shown that COVID-19 has negative impact on stock market. The volatility has increase significantly along with fatality ratio of COVID-19 in US (Albulescu, 2020) and 64 countries stock market also reflect negatively related to COVID-19 confirmed cases in each country (Ashraf, 2020). Baek, et al. (2020) shown different impact on volatility in different industry, in USA during the pandemic the worst sector are entertainment and hospitality lose more than 70 percent of their market capitalizations (Mazur, et al. (2020) but in UK the stock return of consumer discretionary performed significantly worse than other sector in market during COVID-19 (Sherif, 2020). Many studied have confirmed that COVID-19 has impact on stock market but has a short-lived (Okaorie and lin, 2020) and has a different impact in different period (Topcu and Gulat, 2020).

In this paper also use Google Trend as parameter to reflect fear of people. In 2016 Bijl et al. studied on Google search and stock return and found relationship which Google search can predict stock return, but it will change over time, moreover in 5-emerging market (Indonesia, Malaysia, Philippines, Thailand, and Vietnam) has significant negative and sensitive to bad news. During COVID-19 pandemic Google trend can reflect to fear and concern of people (Shamar, 2020), furthermore the term “coronavirus” is the most-search term in history of Google trend and can be utilized in risk management model (Lyoca, et al. 2020).

Hongsakulvasu, Liamukda (2020) studied on Asian stock market analysis using Generalized Additive Model (GAM) to capture sudden jump in daily data of stock market which capture jump very well and very effective, also use GAM find time-varying coefficient GARCH-in-Mean of risk-return relationship in oil market during COVID-19 the result have shown model from time-varying coefficient using GAM has perform better, moreover in case study on Case study in return of Japan portfolio which use GAM to estimate time-vary coefficient in Fama - French Five model which can tell when the portfolio has positive or negative effect,

According to previous studies the COVID-19 has negative relationship with stock market, regarding to all above authors that I mentioned. All study cover on US stock market and UK stock market except Thai stock market also majority paper use COVID-19 confirmed cases or new COVID-19 cases but minority use google trend to show effect so this paper will combine these 2 factors. Especially, in this paper use Generalized Additive Modelling (GAM) which can capture all parameters and reduce generalization error in prediction (Kotu and Deshpande, 2014) to calculate beta in CAPM to show risk of COVID-19 on Stock Exchange of Thailand.

## METHOD

To reach this paper objective author uses traditional Capital Asset Pricing Model (CAPM) comparing alternative approach on CAPM to check whether which approach suit with this circumstance and show risk in Stock Exchange of Thailand during COVID-19 pandemic in year 2020.

First, author test Unit Root by using ADF test.

Condition of time series data is data must stationary because time- series data come from random process. Stationary means data has constant mean and variance all studied time, If the data is not stationary author will transform data to logarithm data or Co-Integration.

This paper must check whether data is stationary or not by using Augmented Dickey-Fuller Test (ADF test) to which solve serial correlation in error term by include lagged change and author test all 3 types which are unit root, unit root whit drift and unit root with drift and deterministic time trend.

Second, Capital Asset Pricing Model: CAPM

CAPM was established in 1960 by William Sharpe, this model has been using widely. CAPM has emphasis about systematic risk or coefficient Beta ( $b_i$ ). Coefficient Beta in CAPM is unavoidable risk in each company from change of outside environment and it has affected to all securities prices. In conclusion which securities have high beta coefficient will have high market risk, hence when market has high volatility, securities that have high beta coefficient will fluctuate more than securities that have less beta coefficient.

Beta can represent by

$$b_i = \frac{COV(r_{i,t}, r_{m,t})}{VAR(r_{m,t})} \quad (1)$$

where,  $b_i$  refers to coefficient beta of security i,  $COV(r_{i,t}, r_{m,t})$  refers to total variance of security i and market at time t and,  $VAR(r_{m,t})$  refers to total variance of market at time t.

Hence, CAPM formula is,

$$r_i - r_f = a_i + b_i(r_m - r_f) + e_i \quad (2)$$

Where,  $r_i$  refers to expected return of security i,  $r_f$  is risk free return of securities i,  $a_i$  is constant of security i,  $b_i$  refer to beta coefficient of security i,  $r_m$  refers to market return,  $e_i$  refers to error of security i at time t.

Finally, author also add new COVID-19 cases as evidence base and Google trend word “coronavirus” (Lyoca,2020) which is the most-searched term in the history of Google trends. Using data from Stock Exchange of Thailand index (SET index) and focus on sectorial level.

Hence, CAPM, COVID-19 and Google trend using SET index formula is,

$$R_{i,t} - R_{f,t} = a_i + \beta_{1,i}(R_{SET,t} - R_{f,t}) + \beta_2(COVID) + \beta_3(GGT) + e_{i,t} \quad (3)$$

Where,  $R_i$  refers to expected return of sector i,  $R_f$  is risk free return of securities i in this paper author use government bond return,  $a_i$  is constant number of sector i,  $\beta_{1,i}$  refers to beta coefficient of sector i,  $\beta_2$  refers to beta coefficient of new COVID-19 cases,  $\beta_3$  refers to beta coefficient of

google trend,  $R_{SET}$  refers to SET return, COVID refers to number of new COVID-19 cases,  $GGT$  refers to searching rate of word in google trend,  $e_i$  refers to error of sector  $i$ ,

The weakness of traditional CAPM is all coefficients ( $\beta_{1,i}$ ,  $\beta_2$ ,  $\beta_3$ ) are constant number all studying time so this paper proposes an alternative approach that allowing coefficient adjustable.

Final, Time-vary coefficient with Generalize Additive Model

Generalize Additive Model (GAM) to estimate the time-vary parameters. GAM applies the semi-parametric smooth function based on recreation splines. Consider on time-vary coefficient ( $\beta_t$ ) autoregressive model with one time-vary intercept and no autoregressive parameter, using example function of  $y_t$  following,

$$y_t = \beta_t x_{t,t} + \varepsilon_t. \quad (4)$$

By using regression splines method, the time-varying parameter can be estimated by using,

$$\hat{\beta}_t = \hat{\alpha}_1 R_1(t) + \hat{\alpha}_2 R_2(t) + \hat{\alpha}_3 R_3(t) + \dots + \hat{\alpha}_K R_K(t), \quad (5)$$

By choosing the basis function  $R(K)$  and number of bias function,  $k$ , then  $\hat{\beta}_t$  can be estimated by using a linear regression method. Very easy example for vary simple can chose bias function as a polynomial with order 4, then  $R_1(t) = 1$ ,  $R_2(t) = t$ ,  $R_3(t) = t^2$ ,  $R_4(t) = t^3$ ,  $R_5(t) = t^4$ . For  $\hat{\beta}_t$  can be any shape from linear and non-linear which depend on time

To optimize a value of estimated time-varying parameter  $\hat{\beta}_t$  can be found when we perform the minimization of this penalized least squares loss function.

$$\sum_{t=1}^T [y_t - \beta_{0,t}]^2 + \lambda \int_0^1 [\beta_t'']^2 dt. \quad (6)$$

The first term of equation 6 is a simple linear least square minimization. The second term is the roughness penalty or wiggleness, The smoothing parameter  $\lambda$  controls the shape of time-varying parameter. If  $\lambda$  is small, the wiggleness penalty will be small, on the other hand, if  $\lambda$  is large, the shape of the parameter will be a straight line.

Choosing an optional smoothing parameter  $\lambda$  by using Generalized Cross Validation score (GCV) as the following equation,

$$GCV = \frac{T \sum_{t=1}^T (y_t - \hat{c}_t)^2}{[tr(I - A)]^2}. \quad (7)$$

The optimal value of  $\lambda$  can be achieved by choosing  $\lambda$  that gives the lowest value of the GCV (Wahba, 1980; Wood, 2006).

Following mean model in equation 3 This paper is applied alternative method which allowing coefficients change along the situation by using Generalize Additive Model (GAM), so time-vary coefficients of CAPM is,

$$R_{i,t} - R_{f,t} = \alpha_{i,t} + \beta_{1,i,t}(R_{m,t} - R_{f,t}) + \beta_{2,t}(COVID_{i,t}) + \beta_{3,t}(GGT_{i,t}) + e_{i,t}. \quad (8)$$

the time-varying coefficient  $\hat{\alpha}_{it}$ ,  $\hat{\beta}_{1,i,t}$ ,  $\hat{\beta}_{2,t}$ ,  $\hat{\beta}_{3,t}$  can be estimated by using generalized additive model with thin-plate spline which is default setting in “mgcv” package on R program as the following equation,

$$\hat{\alpha}_{it}, \hat{\beta}_{1,i,t}, \hat{\beta}_{2,t}, \hat{\beta}_{3,t} = \hat{\alpha}_1 R_1(t) + \hat{\alpha}_2 R_2(t) + \hat{\alpha}_3 R_3(t) + \dots + \hat{\alpha}_K R_K(t), \quad (9)$$

Thin-plate spline don't need to choose node location, also it perfectly performs when author has many variables(wood,2006).

The optimal value of estimated time-varying coefficient parameter can be found when we perform the minimization of this penalized least squares loss function.

$$\sum_{t=1}^T [e_{i,t}]^2 + \lambda \int_0^1 [\beta_t'']^2 dt \quad (10)$$

Denote  $e_{i,t} = R_{i,t} - R_{f,t} - \alpha_{i,t} - \beta_{1,i,t}(R_{m,t} - R_{f,t}) - \beta_2(COVID_t) - \beta_3(GGT_t)$

finding parameter  $\lambda$  by using a grid search, a value of smoothing parameter  $\lambda = 10^{-8} \times 1.5^{i-1}$  when  $i$  is a number of loops through smoothing parameter  $\lambda$ .

Choosing an optional smoothing parameter  $\lambda$  by using Generalized Cross Validation score (GCV) as the following equation,

$$GCV = \frac{T \sum_{t=1}^T (\hat{e}_{i,t})^2}{[tr(I - A)]^2} \quad (11)$$

The optimal value of  $\lambda$  can be achieved by choosing  $\lambda$  that gives the lowest value of the GCV (Wahba, 1980; Wood, 2006).

For model selection method, author uses Mean Square Error (MSE) to compared between traditional CAPM and time-varying coefficient CAPM for the selection model. Finally, we must check a basic assumption of residual including zero mean, autocorrelation test by using Ljung – Box test, and endogeneity test by using correlation test.

## RESULT

In this section author applies traditional CAPM and time-vary CAPM into 8 sectors of Stock Exchange of Thailand (SET), which are industry sector, AGO and food sector consumer sector, financial sector, technology sector, service sector, property sector and resource sector to measure the risk and investigate time-vary effect of SET during COVID-19 pandemic in year 2020.

This section contains 3 parts first is stationary test, next is coefficient of traditional CAPM, lastly is time-vary coefficient CAPM, Ljung – Box test and endogeneity test

Firstly, Checking stationary condition on 8 sectors of SET, New COVID-19 cases, market risk premium ( $R_{m,t} - R_{f,t}$ ) and word searching in Google trend.

**TABLE 1.** ADF test result

|                            | ADF.stat1 | ADF.pvalue1 | ADF.stat2 | ADF.pavalue2 | ADF.stat 3 | ADF.pvalue 3 |
|----------------------------|-----------|-------------|-----------|--------------|------------|--------------|
| <b>Sector 1</b>            | -7.406    | 0.01        | -7.395    | 0.01         | -7.587     | 0.01         |
| <b>Sector 2</b>            | -8.105    | 0.01        | -8.093    | 0.01         | -8.086     | 0.01         |
| <b>Sector 3</b>            | -8.722    | 0.01        | -8.71     | 0.01         | -8.724     | 0.01         |
| <b>Sector 4</b>            | -7.957    | 0.01        | -7.953    | 0.01         | -8.211     | 0.01         |
| <b>Sector 5</b>            | -9.152    | 0.01        | -9.18     | 0.01         | -9.511     | 0.01         |
| <b>Sector 6</b>            | -7.86     | 0.01        | -7.867    | 0.01         | -7.898     | 0.01         |
| <b>Sector 7</b>            | -7.365    | 0.01        | -7.369    | 0.01         | -7.421     | 0.01         |
| <b>Sector 8</b>            | -7.359    | 0.01        | -7.354    | 0.01         | -7.44      | 0.01         |
| <b>Market Risk Premium</b> | -7.724    | 0.01        | -7.717    | 0.01         | -7.827     | 0.01         |
| <b>Google trend</b>        | -8.426    | 0.01        | -8.414    | 0.01         | -8.415     | 0.01         |
| <b>New COVID-19 cases</b>  | -12.217   | 0.01        | -12.218   | 0.01         | -12.235    | 0.01         |

Note: ADF stat1 is unit root test ADF stat2 is unit root with drift test and ADF test3 is unit root with and deterministic time trend. P-value  $\leq 0.001$  is highly significant. P-value  $\leq 0.01$  is very significant. Sector 1 is industry sector, sector 2 is AGO and food sector, sector 3 is consumer sector, sector 4 is financial sector, sector 5 is technology sector, sector 6 is service sector, sector 7 is property sector and sector 8 is resource.

According to table 1. Result of unit root test show P-value of ADF test is rejection of null hypothesis and accept alternative hypothesis at a 99% means data is stationary.

Result of coefficient in traditional CAPM

In this part shows coefficient of each sector in traditional CAPM, which has constant number all time studying, and author also add new COVID-19 cases and Google Trend word searching is “Coronavirus” as factors in CAPM. In conclusion this equation author must estimate four coefficient first is intercept term, second is Market Risk Premium, third is new COVID-19 cases, and Google Trend searching.

**TABLE 2.** Traditional CAPM coefficient

| <b>Coefficients: Sector 1</b> |              |             |         |              |
|-------------------------------|--------------|-------------|---------|--------------|
|                               | Estimate     | Std. Error  | t value | Pr(> t )     |
| (Intercept)                   | 0.000397618  | 0.000588582 | 0.68    | 0.5          |
| MRP                           | 0.980349363  | 0.036152213 | 27.12   | <2e-16 ***   |
| COVID                         | -0.000001805 | 0.000015426 | -0.12   | 0.91         |
| GT                            | 0.000000475  | 0.00010104  | 0       | 1            |
| <b>Coefficients: Sector 2</b> |              |             |         |              |
|                               | Estimate     | Estimate    | t value | Pr(> t )     |
| (Intercept)                   | 0.00020351   | 0.00040687  | 0.5     | 0.62         |
| MRP                           | 0.7920662    | 0.02499074  | 31.69   | <2e-16 ***   |
| COVID                         | -0.00000503  | 0.00001066  | -0.47   | 0.64         |
| GT                            | 0.00000161   | 0.00006985  | 0.02    | 0.98         |
| <b>Coefficients: Sector 3</b> |              |             |         |              |
|                               | Estimate     | Std. Error  | t value | Pr(> t )     |
| (Intercept)                   | 0.00015716   | 0.0007964   | 0.2     | 0.84         |
| MRP                           | 0.24328261   | 0.04891716  | 4.97    | 0.000001 *** |
| COVID                         | -0.00000468  | 0.00002087  | -0.22   | 0.82         |
| GT                            | 0.00000151   | 0.00013672  | 0.01    | 0.99         |
| <b>Coefficients: Sector 4</b> |              |             |         |              |
|                               | Estimate     | Std. Error  | t value | Pr(> t )     |
| (Intercept)                   | -0.00020135  | 0.00051958  | -0.39   | 0.7          |
| MRP                           | 0.9836207    | 0.0319137   | 30.82   | <2e-16 ***   |
| COVID                         | 0.00001956   | 0.00001362  | 1.44    | 0.15         |
| GT                            | -0.00000647  | 0.00008919  | -0.07   | 0.94         |
| <b>Coefficients: Sector 5</b> |              |             |         |              |
|                               | Estimate     | Std. Error  | t value | Pr(> t )     |
| (Intercept)                   | 0.00068624   | 0.00061785  | 1.11    | 0.27         |
| MRP                           | 0.64532658   | 0.03795008  | 17      | <2e-16 ***   |
| COVID                         | -0.00001527  | 0.00001619  | -0.94   | 0.35         |
| GT                            | 0.00000434   | 0.00010606  | 0.04    | 0.97         |



**TABLE 2.** (Continued)

| <b>Coefficients: Sector 6</b> |              |             |         |            |
|-------------------------------|--------------|-------------|---------|------------|
|                               | Estimate     | Std. Error  | t value | Pr(> t )   |
| (Intercept)                   | -0.000251836 | 0.000366148 | -0.69   | 0.49       |
| MRP                           | 0.851712205  | 0.022489753 | 37.87   | <2e-16 *** |
| COVID                         | 0.00000092   | 0.000009596 | 0.1     | 0.92       |
| GT                            | -0.000000226 | 0.000062855 | 0       | 1          |
| <b>Coefficients: Sector 7</b> |              |             |         |            |
|                               | Estimate     | Std. Error  | t value | Pr(> t )   |
| (Intercept)                   | -0.0002694   | 0.00036363  | -0.74   | 0.46       |
| MRP                           | 0.82007972   | 0.02233488  | 36.72   | <2e-16 *** |
| COVID                         | 0.00000784   | 0.00000953  | 0.82    | 0.41       |
| GT                            | -0.00000253  | 0.00006242  | -0.04   | 0.97       |
| <b>Coefficients: Sector 8</b> |              |             |         |            |
|                               | Estimate     | Std. Error  | t value | Pr(> t )   |
| (Intercept)                   | -0.000025558 | 0.000534895 | -0.05   | 0.96       |
| MRP                           | 1.125997249  | 0.032854624 | 34.27   | <2e-16 *** |
| COVID                         | 0.000001377  | 0.000014019 | 0.1     | 0.92       |
| GT                            | -0.000000452 | 0.000091823 | 0       | 1          |

Denote:  $\alpha_{i,t}, \beta_{1,t}, \beta_{2,t}, \beta_{3,t}$  is intercept term, coefficient of market risk premium, coefficient of new COVID-19 cases and coefficient of google trend in order. Statistic significant reject null hypothesis at level, 1%(\*\*\*) , 5% (\*\*) and 10% (\*).

In result from traditional CAPM in every sector of Stock Exchange of Thailand (SET) is affected by only Market Risk Premium (MRP) which is  $\beta_{1,t}$  on the other hand, coefficient of New COVID-19 cases and Google Trend has no effect to each sector during 2020.

Next step author shows Time-vary CAPM which applied GAM that allow coefficient fluctuate to time.

**TABLE 3.** Efficient Degree of Freedom

|                 | Sector 1 | Sector 2 | Sector 3 | Sector 4 | Sector 5 | Sector 6 | Sector 7 | Sector 8 |
|-----------------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Constant</b> | 3.014259 | 1.000027 | 1.000001 | 1.000011 | 1.348188 | 1.000021 | 1        | 1.000018 |
| <b>MRP</b>      | 8.347532 | 8.620104 | 2        | 8.246702 | 8.917716 | 7.870867 | 6.653744 | 7.77912  |
| <b>COVID</b>    | 2.003637 | 2.000782 | 2        | 3.430119 | 2.000567 | 2.00171  | 2.000039 | 2.000685 |
| <b>GT</b>       | 2.000033 | 2.000103 | 2        | 2.000022 | 2.458053 | 2.000019 | 2.000004 | 2.000068 |

Note: Efficient Degree of Freedom (EDF) show number of basis function line.

**TABLE 4.** P-value of Coefficient of Time-vary CAPM

|                 | Sector 1  | Sector 2  | Sector 3 | Sector 4   | Sector 5   | Sector 6  | Sector 7  | Sector 8  |
|-----------------|-----------|-----------|----------|------------|------------|-----------|-----------|-----------|
| <b>Constant</b> | 0.2912103 | 0.1330509 | 0.78758  | 0.01170994 | 0.14784401 | 0.7823735 | 0.6634212 | 0.7017876 |
| <b>MRP</b>      | 0         | 0         | 0        | 0          | 0          | 0         | 0         | 0         |
| <b>COVID</b>    | 0.3325447 | 0.7649803 | 0.891623 | 0.06331555 | 0.01289304 | 0.878675  | 0.5210869 | 0.1817151 |
| <b>GT</b>       | 0.975863  | 0.8872801 | 0.995759 | 0.77763248 | 0.57130855 | 0.9901473 | 0.9529104 | 0.9793662 |

*Note:* Statistic significant reject null hypothesis at level, . P-value  $\leq 0.001$  is highly significant. P-value  $\leq 0.01$  is very significant. P-value  $\leq$  is significant. P-value more than 0.05 is not significant.

In Time-vary CAPM result in table 3 is Efficient Degree of Freedom (EDF) which refer to number of basis function that can estimate a parameter in model. The package “mgcv” in R program has set default of these basis function so author has the wiggly line in each parameter if EDF is close to 1 means that parameter is like to be linear shape (Shadish, Zuu & Sullivan, 2014). Table 4 shows rejection of null hypothesis in every sector, all sector in SET rejects null hypothesis only Market Risk Premium except financial sector which constant number and in technology reject null hypothesis of COVID-19 which is evidence base which mean in financial sector constant term ( $a_{(i,t)}$ ) has effect and New COVID-19 cases ( $\beta_{(2,t)}$ ) have effect on technology sector.

Next step, author show and interpret time-vary coefficient which allow coefficients fluctuate depend on time in Stock Exchange of Thailand.

**FIGURE 1:** The estimate of time-vary coefficient of all sectors

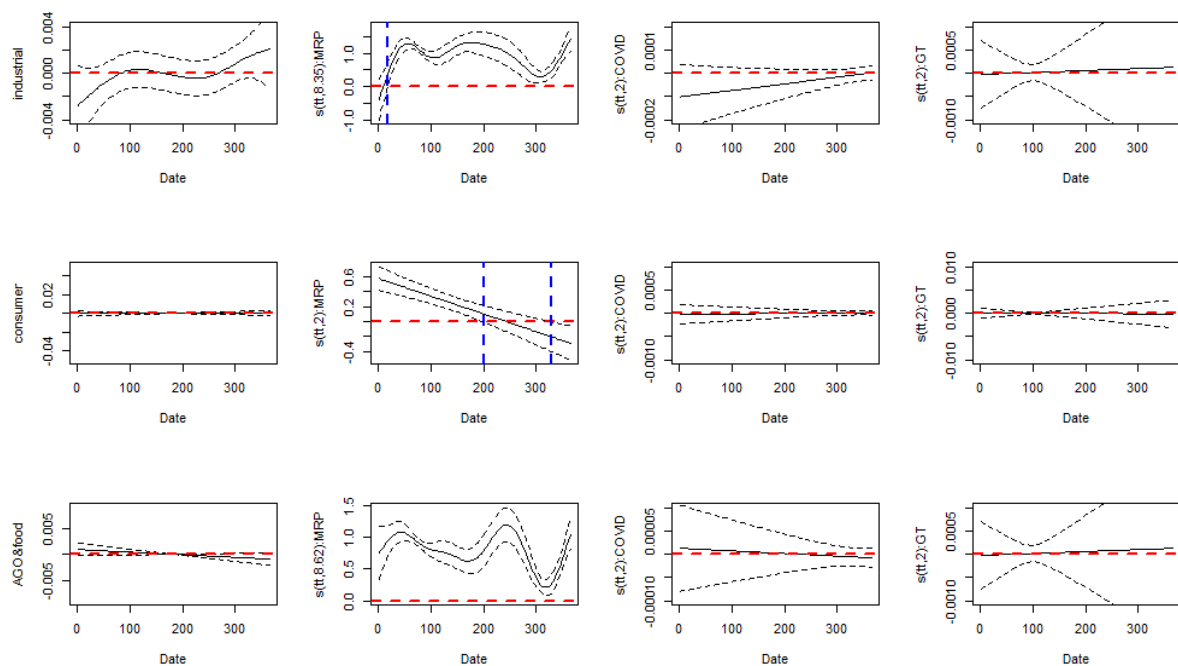
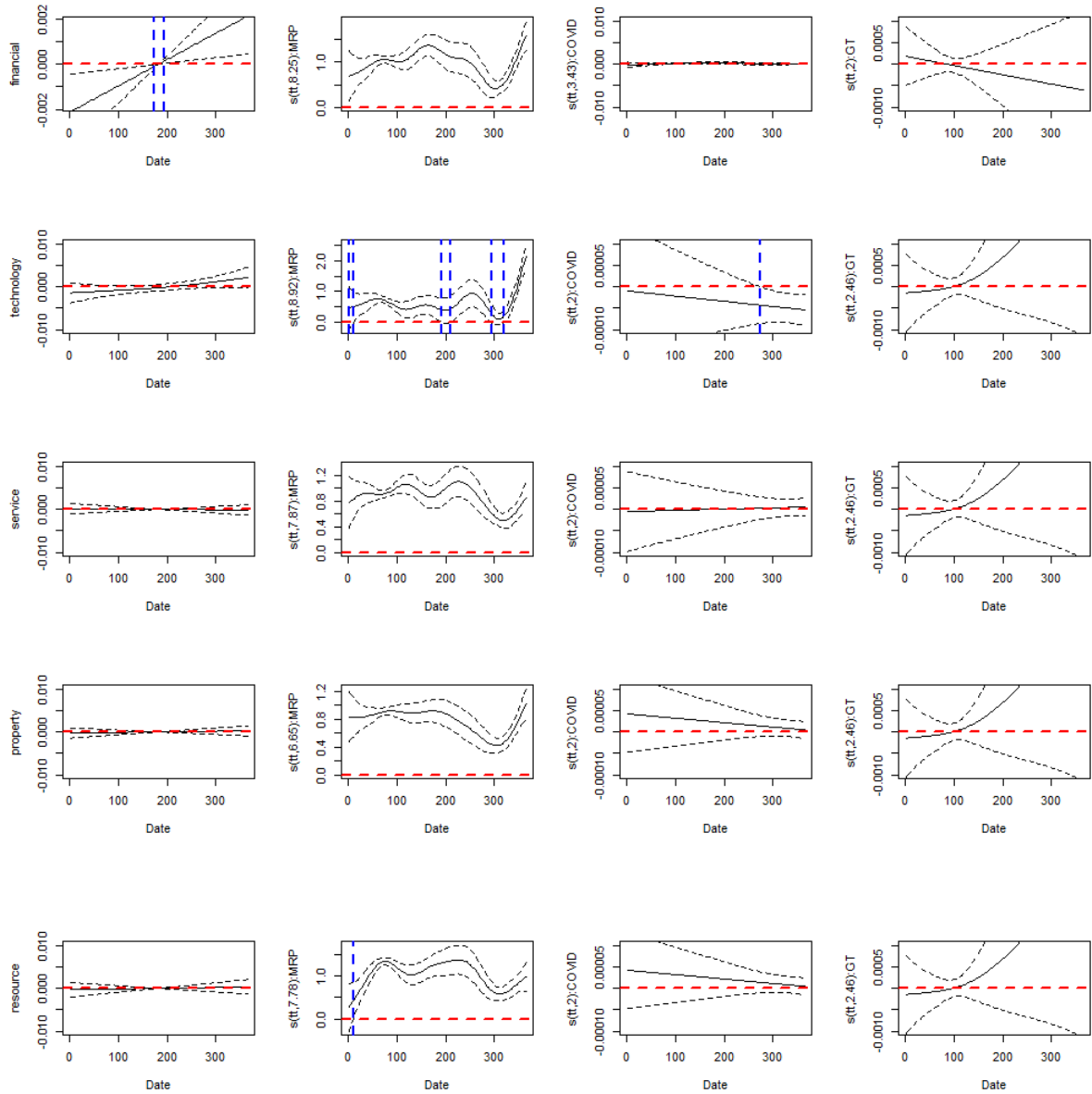


**FIGURE 1: (Continued)**



*Note:* In vertical author arrange pictures by sector 1-8 which is industrial sector, AGO and food sector and other sector in order. In horizontal author arrange pictures by  $a_{i,t}$ ,  $\beta_{1,t}$ ,  $\beta_{2,t}$  and  $\beta_{3,t}$ .

Expanding picture, every black line and black dotted line has showed coefficient is estimated by using GAM, and red dotted line shows value of coefficient equal to 0 means that coefficient accept null hypothesis.

**TABLE 5.** Timeline of start and end Time-vary coefficient significant of CAPM

|                | Sector 1                                      | Sector 2           | Sector 3                                                                                            | Sector 4                                                   | Sector 5                                                                                                                                                                                 | Sector 6           | Sector 7           | Sector 8                              |
|----------------|-----------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|---------------------------------------|
| $\alpha_{i,t}$ | -                                             | -                  | -                                                                                                   | 21 <sup>st</sup><br>June to<br>11 <sup>th</sup> Ju-<br>ly. | -                                                                                                                                                                                        | -                  | -                  | -                                     |
| $\beta_{1,t}$  | After<br>18 <sup>th</sup><br>January<br>2020. | All time<br>study. | 1 <sup>st</sup> January<br>to 17 <sup>th</sup> July<br>and after<br>25 <sup>th</sup> No-<br>vember. | All time<br>study                                          | 11 <sup>th</sup> Janu-<br>ary – 9 <sup>th</sup><br>July, 30 <sup>th</sup><br>July – 20 <sup>th</sup><br>October<br>and 17 <sup>th</sup><br>November<br>– 31 <sup>st</sup> De-<br>cember. | All time<br>study. | All time<br>study. | after<br>11 <sup>th</sup><br>January. |
| $\beta_{2,t}$  | -                                             | -                  | -                                                                                                   | -                                                          | after 1 <sup>st</sup><br>October                                                                                                                                                         | -                  | -                  | -                                     |
| $\beta_{3,t}$  | -                                             | -                  | -                                                                                                   | -                                                          | -                                                                                                                                                                                        | -                  | -                  | -                                     |

To explain table 5, coefficient of intercept term, market risk premium, COVID-19 and Google Trend has performed differently sometime some coefficient has no effect to stock market in Thailand. In AGO and Food, service, and property the coefficient of market risk premium has affect all time study, but in other sector it performs differently. Coefficient of intercept term has effect in financial sector only, and coefficient of COVID-19 has effect only in technology sector. Choosing model author compare Mean Square Error (MSE) between traditional CAPM and time-varying coefficient CAPM.

**TABLE 6.** Mean Square Error (MSE) of traditional CAPM and Time-vary coefficient CAPM

|                 | Mean Square Error (MSE) |                |
|-----------------|-------------------------|----------------|
|                 | Traditional CAPM        | Time-vary CAPM |
| <b>Sector 1</b> | 0.00012500              | 0.00009087     |
| <b>Sector 2</b> | 0.00005973              | 0.00004106     |
| <b>Sector 3</b> | 0.00022886              | 0.00021292     |
| <b>Sector 4</b> | 0.00009741              | 0.00007653     |
| <b>Sector 5</b> | 0.00013774              | 0.00010810     |
| <b>Sector 6</b> | 0.00004837              | 0.00004086     |
| <b>Sector 7</b> | 0.00004771              | 0.00003914     |
| <b>Sector 8</b> | 0.00010324              | 0.00007999     |

Selecting model by choosing minimum Mean Square Error, in this paper Time-vary coefficients CAPM has performed better in every sectors.

Next step, author use Ljung – Box test to check model that show lack of serial autocorrelation this test determines either error is iid (i.e. white noise) or not. Especially it is a test lack of fit or not.

**TABLE 7.** Result of Ljung – Box test

|                 | <b>X-squared</b> | <b>Df</b> | <b>p-value</b> |
|-----------------|------------------|-----------|----------------|
| <b>Sector 1</b> | 0.2              | 1         | 0.7            |
| <b>Sector 2</b> | 4.7              | 1         | 0.03           |
| <b>Sector 3</b> | 0.000062         | 1         | 1              |
| <b>Sector 4</b> | 0.74             | 1         | 0.4            |
| <b>Sector 5</b> | 0.21             | 1         | 0.6            |
| <b>Sector 6</b> | 0.26             | 1         | 0.6            |
| <b>Sector 7</b> | 0.25             | 1         | 0.6            |
| <b>Sector 8</b> | 0.53             | 1         | 0.5            |

*Note:* P-value less than 0.05 is reject null hypothesis, p-value greater than 0.05 accept null hypothesis.

All sectors accept null hypothesis except AGO and food sector which means all sectors does not show lack of fit except AGO and food sector is show lack of fit in model. Author also check auto-correlation of standardize residual, all residual in every sector is iid(0,1) except AGO and food sector.

According that I mentioned that only AGO and Food sector that lack of fit in model because government make policy to support investor and company by investing 7,500 million baht in stock market and mainly invest in food industry which in AGO and food sector to support food company owner.

Finally, author use Pearson's correlation test to test correlation between Market Risk Premium, Google trend, New COVID-19 cases, and residual.

**TABLE 8.** Endogeneity test

|                 |          | <b>t</b>             | <b>df</b> | <b>P-value</b> |
|-----------------|----------|----------------------|-----------|----------------|
| <b>Sector 1</b> | MPR      | 0.00000000000042     | 363       | 1              |
|                 | COVID-19 | 0.00000000000073     | 363       | 1              |
|                 | GT       | -0.000000000000092   | 363       | 1              |
| <b>Sector 2</b> | MPR      | 3.4e <sup>-15</sup>  | 363       | 1              |
|                 | COVID-19 | 0.00000000000017     | 363       | 1              |
|                 | GT       | 0.00000000000028     | 363       | 1              |
| <b>Sector 3</b> | MPR      | 0.00000000000038     | 363       | 1              |
|                 | COVID-19 | 0.00000000000081     | 363       | 1              |
|                 | GT       | 0.00000000000061     | 363       | 1              |
| <b>Sector 4</b> | MPR      | -0.00000000000063    | 363       | 1              |
|                 | COVID-19 | 0.00000000000025     | 363       | 1              |
|                 | GT       | -0.00000000000034    | 363       | 1              |
| <b>Sector 5</b> | MPR      | -0.00000000000075    | 363       | 1              |
|                 | COVID-19 | -0.00000000000016    | 363       | 1              |
|                 | GT       | -0.00000000000018    | 363       | 1              |
| <b>Sector 6</b> | MPR      | 0.00000000000023     | 363       | 1              |
|                 | COVID-19 | -0.00000000000015    | 363       | 1              |
|                 | GT       | 0.00000000000025     | 363       | 1              |
| <b>Sector 7</b> | MPR      | -0.00000000000056    | 363       | 1              |
|                 | COVID-19 | -0.00000000000014    | 363       | 1              |
|                 | GT       | 0.00000000000014     | 363       | 1              |
| <b>Sector 8</b> | MPR      | -4.3e <sup>-15</sup> | 363       | 1              |
|                 | COVID-19 | -0.00000000000017    | 363       | 1              |
|                 | GT       | 0.00000000000036     | 363       | 1              |

*Note:* the alternative hypothesis is true correlation is not equal to 0.

Endogeneity test show correlation of Market Risk Premium, Google trend, New COVID-19 cases to residual is 0.

In conclusion, model from Time-vary coefficient CAPM has perform better in every sector, author also interpret result form Time-vary coefficient CAPM during the pandemic Market Risk Premium has perform differently in different sector and other coefficients have effect in different sector.

## **DISCUSSION**

In 2020, new COVID-19 cases which is evidence base has effect in only technology sector while Google trend which reflect to people fear has not affect in every sector, and Lyoca, et al. (2020) has not found relationship between stock market and Google Trend.

Baes on my assumption that COVID-19 has effect to stock market in Thailand has different impact to different sector in different time, this paper has proven my assumption is true which can show the different impact in different sector impact which show in figure 1.

According to literature review about using Generalized Additive Model (GAM) show better performance of model which this paper shows lower Mean Square Error (MSE) in time-vary CAPM in every sector, and the effect of COVID-19 has impacted a lot on AGO and food sector which Mazur, et al. (2020) has found impact of COVID-19 has effect on food sector the most in S&P 1500.

In concluding, During the pandemic Market Risk Premium has perform abnormally and differently in different sector which support author assumption and Time-vary coefficient CAPM using Genialized Additive Model has perform better than traditional CAPM in every sector of Stock Exchange of Thailand.

## **RECOMMENDATION**

In this paper find relationship between COVID-19 and SET index using evidence base which is new COVID-19 cases and Google trend to refer fear of people but didn't find the effect of COVID-19 on Market Risk Premium. During the pandemic SET index has shrink significantly along with rising in COVID-19 evidence base, also AGO and food sector has lack of fit because government invest money to support investor and owner specially in food industry, so in further study may look down to industrial level.

Now Thailand has 2nd and 3rd breakout of COVID-19 but this paper only analyzes on 1st outbreak of Thailand, and Google trend has many words that relate to COVID-19 that future researcher can use to analyze.

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