

## Causal Influence of Elderly Care Entrepreneurs in Thailand

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### Abstract

This is a mixed-method design using quantitative and qualitative research methods with objectives (1) to study opinions on entrepreneurship, marketing orientation, innovation orientation, and the performance of the elderly care business in Thailand and (2) to study the causal influence of entrepreneurship, marketing orientation, innovation orientation, and the performance of the elderly care business in Thailand. The sample group in this research consisted of 240 entrepreneurs and executives in the elderly care business in Thailand through stratified random sampling. This is mixed research. The research instrument was a questionnaire. Content validity had an IOC of greater than 0.5 and a total confidence value of 0.944. Data were analyzed using exploratory factor analysis. Factors were extracted by factor analysis. There are sub techniques of axis and rotate of orthogonal element axis with the Varimax in processing and semi-structured in-depth interviews for qualitative research. The content was analyzed to be interpreted and explained along with quantitative research. The results revealed that entrepreneurship directly influenced marketing orientation, innovation orientation, and performance. Marketing orientation directly influenced performance, and innovation orientation directly influenced performance. A structural equation model of the causal influence of elderly care business entrepreneurs in Thailand was consistent with the empirical data ( $\chi^2 = 51.613$ ,  $\chi^2 / df = 1.358$ , GFI = 0.964, CFI = 0.995, NFI = 0.982, RMSEA = 0.39, RMR = 0.13). The analysis results revealed that entrepreneurship mostly and directly influenced innovation orientation. Secondly, entrepreneurship directly influenced marketing orientation. Marketing orientation directly influenced performance. Innovation orientation directly influenced performance, and entrepreneurship directly influenced performance.

**Keywords:** Entrepreneurship, marketing orientation, innovation orientation, performance, elderly care business

### INTRODUCTION

The rapid changes in the world, such as economy, society, culture, politics, technology, environment, and advancement in medical and public health, including lower birth and mortality rates and the longer life expectancy of the world's population, caused a change in the

population structure. Therefore, the world must face a major problem of the rapidly increasing elderly population. Especially in 2050, the number of elderly people will increase to 2 billion people in developing countries. In 2050, the number of elderly people is estimated to be 1.5 trillion [26]. This includes Asia which is the

world's most populous region. In 1995, there were approximately 281 million elderly people, especially in East Asia, comprising China, Korea, Hong Kong, Mongolia, and Japan with the highest number of elderly people, followed by South Central Asia (Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan, and Sri Lanka), followed by Southeast Asia (Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam), and the group with the lowest number of elderly people is in West Asia (Australia, New Zealand and the islands).

For Thailand, the number of elderly people is increasing rapidly in terms of both the number and the ratio of the population to the whole country. Based on estimates from the National Statistical Office in 2007, the population aged 60 years above in 2020 will have an elderly population of 10.80 million people or 15.30% of the whole population in the country. This means that Thailand has entered into "aging society" which refers to a country with a population aged over 60 years, accounting for 10% of the total population and it is believed that the country will enter aging population or the condition of population aging, which means an increase in the proportion of the population aged 65 years above to more than 7 percent of the total population. [15]

The increasing number of the elderly was a result of lower birth rates due to social changes. Elderly people live longer as a result of medical advancement [14] along with population movement from high birth rates in the past or in during World War 2 at the age of 60 years (baby boom)(1946-1964) that entered into elderly age at the same time. Therefore, the structure of the world population changed, and there were many elderly people. Later, due to widespread contraceptive campaigns with an increasingly volatile economy, people had fewer children and the slower marriages of modern young people, causing the birth rate to decrease including the prosperity of the urban area to play a greater role (Saito, Sagawa and Kanagawa, 2005, pp. 33-35).

Entering into aging society plays a key role in social and economic conditions and employment as well as the allocation of the country's health and social resources both in the short and long term [15]

The elderly care business has now a tendency to expand, resulting in service business opportunities, especially related businesses that provide various services to the elderly, such as care and home services for the elderly, services to take them on a trip or to see a doctor. This is to act on behalf of family members who have regular workloads. It is important to create quality service business entrepreneurs to support the growing demand of both the elderly in the country and from abroad who travel to use more services and live in Thailand including caregivers for the elderly to work abroad. People who will be successful in the elderly service business must learn the true needs of the target audience. by focusing on the quality of staff and effective service business management. At present, there are few real elderly service entrepreneurs and there are limitations in some groups. Most of them had degrees in social sciences or public health sciences while in the business and finance sectors, there is still not a comprehensive understanding of management. Therefore, they cannot expand the business to grow as it should due to various problems and obstacles such as a lack of knowledgeable personnel and specialized expertise for serving the elderly, marketing, innovation, management, and a lack of clear guidelines for business operations.

Therefore, the elderly care business should have a universal standard. There should be medical personnel as entrepreneurs or stakeholders in business operations for clients to be properly taken care of. Some establishments lack knowledge in management, marketing, health service strategies, and application of integrated marketing communication strategies that are consistent with current consumer behavior so that marketing communication programs can lead to effective marketing communication with

consumers. [22] For such reasons, it is an opportunity for the elderly care business as a good alternative for many families who do not have time to take care of the elderly in the future. [25] Therefore, this research aims to study the influence of entrepreneurship, marketing orientation, innovation orientation, and the performance of the elderly care business in Thailand since the elderly care business plays an important role in supporting the elderly society. It is necessary to promote the elderly care business to improve service quality standards of establishments to accommodate the elderly who will have an increasing number to use the service and have the ability to compete at a more international level.

## **MATERIALS AND METHODS**

### **OBJECTIVES**

The objective of this research was to identify the influence of entrepreneurship in the elderly care business in Thailand as follows:

1. To study opinions towards entrepreneurship, marketing orientation, innovation orientation, and the performance of the elderly care business in Thailand.
2. To study the causal influence of entrepreneurship, marketing orientation, innovation orientation, and the performance of the elderly care business in Thailand.

### **HYPOTHESES**

H1: Entrepreneurship directly influenced marketing orientation.

H2: Entrepreneurship directly influenced innovation orientation.

H3: Entrepreneurship directly influenced performance.

H4: Marketing orientation directly influenced performance.

H5: Innovation orientation directly influenced performance.

### **LITERATURE REVIEW**

Entrepreneurship based on the concepts of Covin and Slevin (1989)[4], Lamkin and Dess (1996) and, Frese (2000) consists of latent variables, risk-taking, proactive action, and intense competition.

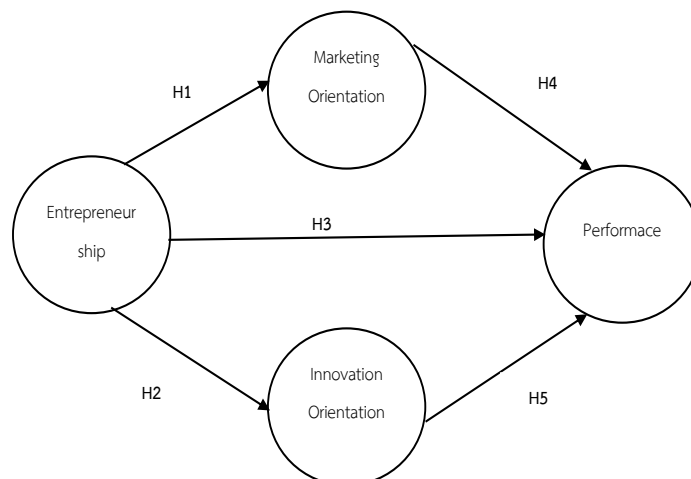
Marketing orientation based on the concept of Narver and Slater (1990)[16] consists of latent variables, customer orientation, competitor orientation and coordination in the organization.

The concept of marketing orientation is applied from marketing concept, which is a modern fundamental concept of marketing management that is practical.

Innovation orientation based on the concepts of Avlonitis et al., (1994)[1], North and Smallbone (2000), and Wang and Ahmed (2004), consists of latent variables, product innovation, process innovation, and marketing innovation.

Performance based on the concepts of Kohli and Jaworski (1990)[11] and Narver and Slater (1990)[16] consists of latent variables, market share, sales growth, and profitability.

The researcher has conducted a literature review, creating research framework by focusing on 4 variables, including entrepreneurship, marketing orientation, innovation orientation, and performance as shown in Figure 1.



**Figure 1: Research Conceptual Framework**

## **METHODOLOGY**

The researcher employed a mixed-method design using quantitative research which uses survey research and qualitative research which uses in-depth interviews. These two methods were integrated as an approach to support each other.

## **POPULATION, SAMPLE, AND SAMPLING METHOD**

### **POPULATION**

The population in this research was 666 entrepreneurs or executives of elderly care businesses in Thailand.[6]

### **SAMPLE SIZE DETERMINATION**

In this study, the sample size was determined for use in the analysis of the structural equation model in several ways to obtain a good representative sample of the data. The researcher employed the rule of thumb. The sample size should be 10-20 times per one research variable or not less than 500 units. The sample size was determined using a rule adopted by Schumacher and Lomax, Hair et al.[18] There were 12 observed variables in this study. Therefore, a sample size of 20 times the variable was chosen. Therefore, the appropriate sample was at least 240 people.

## **SAMPLE**

The sample in this research was 240 entrepreneurs or executives of elderly care businesses in Thailand registered as juristic persons. The researcher has allocated the sample size based on proportional stratified random sampling. Data collection was done by using closed-ended questionnaires by distributing them to the sample group. Probability sampling was used by simple random sampling from a computer from elderly care business entrepreneurs in Thailand.

## **RESEARCH INSTRUMENT**

The research instruments were a questionnaire and an in-depth interview. The questionnaire was a questionnaire using a 7-point Likert scale[12], consisting of 4 parts: Part 1 the personal information of the respondents, and Part 2 instrument gauges of 4 main variables which are entrepreneurship, marketing orientation, innovation orientation, and performance, totaling 44 items to study the Structural Equation Model Analysis (SEM).

Qualitative research instrument was in-depth interviews using a structured interview for discussion or interview.

## **ASSESSMENT OF RESEARCH INSTRUMENT**

Assessment of Quantitative Instrument

1. Content validity is about validating content tools based on academic judgment from 3 content experts with item objective congruency (IOC) of greater than 0.5.

2. The reliability of the instrument was tested by 30 tryouts to determine the reliability by Cronbach's alpha coefficient, where the alpha coefficient was greater than and equal to 0.70. In this study, Cronbach's alpha coefficient was 0.944.

## **ASSESSMENT OF QUALITATIVE INSTRUMENT**

Data validation in qualitative research must be accurate and reliable by following approaches.

1. The data must have completeness for the study, leading to description, explanation, and conclusion of the findings based on reliable issues. The completeness of the data was tested by a triangulation, where the results of data triangulation indicated that the data were not different.

2. The data must have accuracy in summarizing and interpreting the data. The researcher proceeded by processing the data obtained from the content analysis, documents, and recording from the interview results to write a tangible description of the situation to confirm the validity of the analysis results and synthesis of the data.

3. The validation is consistent with the theoretical framework. The researcher has attempted to gather information related to various indicators to compare the results for improvement of the conclusions and explanations about the research findings to be clearer.

## **RESULTS**

### **DATA ANALYSIS**

Regarding quantitative research, the data analysis method was employed according to data characteristics and research objectives as follows:

1. Frequency and percentage were employed for the analysis of basic statistics on general information of the respondents.

2. Mean and standard deviation (S.D.) were employed for the analysis of opinions of elderly care business entrepreneurs in Thailand.

3. Structural Equation Model Analysis (SEM) was to analyze the causal influence of independent variables with dependent variables, both direct and indirect influences and confirmatory factor analysis was used to confirm the performance of elderly care business entrepreneurs in Thailand of the model developed from the empirical data in the conceptual framework.

Regarding qualitative research, the data obtained from the in-depth interviews were employed to select only issues related to the research framework and encode the key sentences to organize the data into a group according to the research conceptual framework. The data were presented in describing the results or findings. Then, the results of the qualitative research data analysis were interpreted and the findings of the quantitative research were explained to confirm that the results from both the quantitative and qualitative research are consistent or related to link to the results of quantitative research that has been carried out and concluded previously.

## **CONCLUSIONS**

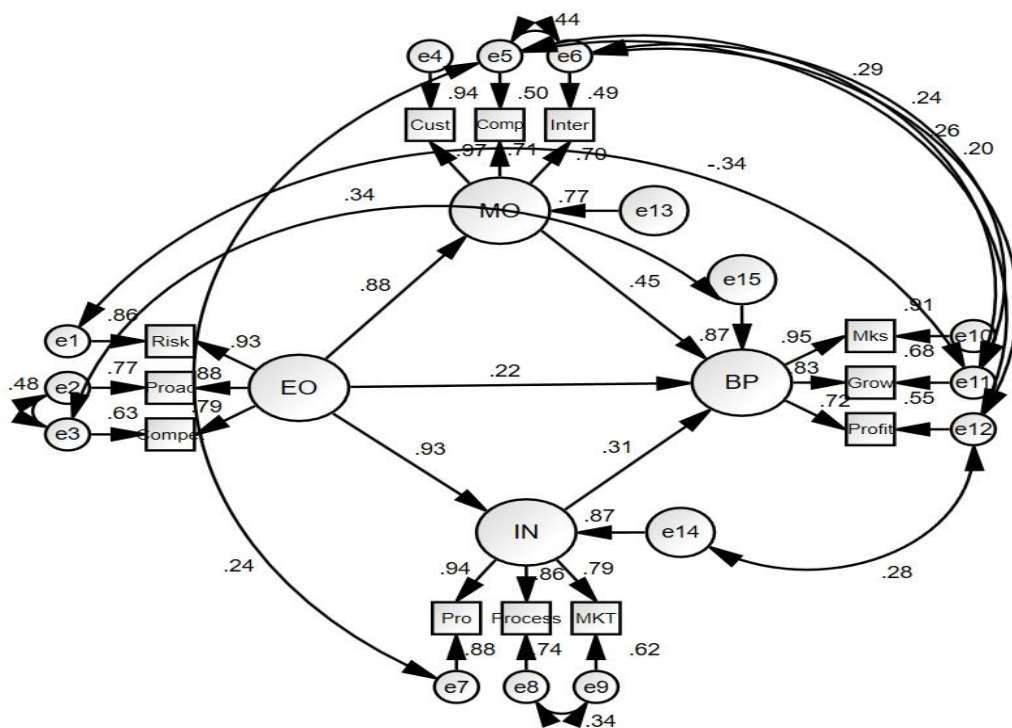
### **1. General Information of the Respondents**

Regarding general information of 240 respondents who completed the online questionnaire, 124 people were female, representing 51.67%. 97 people were aged 51-60 years old, representing 40.42%. 179 people had marital status, representing 74.58% while 186 people graduated with a bachelor's degree, representing 77.50%.

Regarding general information of establishments, 105 establishments have operated for 6-10 years, representing 43.75%, and 240 establishments had the employees not more than 50 people, representing 100.00%.

2. The results of the structural equation analysis of entrepreneurship, marketing orientation, innovation orientation, and performance of elderly care entrepreneurs in Thailand indicated that the model variables consisted of 1) entrepreneurship (EO), which consisted of risk-taking (Risk), proactive action (Proac), and intense competition (Comp), 2) market orientation (MO), which consisted of customer orientation (Cust), competitor orientation

(Comp), and inter cooperation in the organization (Inter), 3) innovation orientation (IN), which consisted of product innovation (Pro), process innovation (Process), and marketing innovation (MKT), and 4) performance (BP), which consisted of market share (Mks), sales growth (Grow), and profitability (profit).



Chi-square = 51.613, Chi-square/df = 1.358, df = 38, p = .069, CFI = .995, GFI = .964, NFI = .982, RMSEA = .039, RMR = .013

**Figure 2: Analysis Result of Causal Influence Structure Equation of Elderly Care Business Entrepreneurs in Thailand**

From Figure 2, the results of the analysis of the causal influence structure equation revealed that empirical data, which consists of information in all four areas: entrepreneurship, marketing orientation, innovation orientation, and

performance, affected the external environment, resulting in the development of entrepreneurship. Entrepreneurship involves the courage to take risks and proactive action as well as a solution to stimulate competition, resulting in a good

performance, more acceptance from the market, and new emergence of innovations.

Marketing orientation concerns customer service, studying competitors, and a focus on inter coordination in the organization, resulting in effective and better performance.

Innovation orientation involves product development, organizational performance, studying process innovations to apply and find marketing innovations that are suitable for development in all areas, resulting in a better performance.

Performance is the result of the above-mentioned actions, causing a balanced market share, sales growth, and profitability.

The empirical data of the research found that entrepreneurship directly influenced marketing orientation with a path coefficient of 0.88.

Entrepreneurship directly influenced innovation orientation with a path coefficient of 0.93.

Entrepreneurship directly influenced performance with a path coefficient of 0.22.

Marketing orientation directly influenced performance with a path coefficient of 0.45.

Innovation orientation directly influenced performance with a path coefficient of 0.31.

Moreover, indirect influences were found. Entrepreneurship was positively influenced through marketing orientation, leading to a performance with a path coefficient of 0.447, and entrepreneurship was positively influenced through innovation orientation, leading to a performance with a path coefficient of 0.312 as shown in Figure 3.

### **HYPOTHESIS TESTING**

Hypothesis 1: Entrepreneurship directly influenced marketing orientation. The hypothesis testing revealed that the empirical data supported the research hypothesis at a statistical significance of 0.001, meaning that entrepreneurship directly influenced marketing orientation.

Hypothesis 2: Entrepreneurship directly influenced innovation orientation. The

hypothesis testing revealed that the empirical data supported the research hypothesis at a statistical significance of 0.001, meaning that entrepreneurship directly influenced innovation orientation.

Hypothesis 3: Entrepreneurship directly influenced a performance. The hypothesis testing results revealed that the empirical data supported the research hypothesis at a statistical significance of 0.01, meaning that entrepreneurship directly influenced a performance.

Hypothesis 4: Marketing orientation directly influenced a performance. The hypothesis testing revealed that the empirical data supported the research hypothesis at a statistical significance of 0.001, meaning that marketing orientation directly influenced a performance.

Hypothesis 5: Innovation orientation directly influenced a performance. The hypothesis testing revealed that the empirical data supported the research hypothesis at a statistical significance of 0.05, meaning that innovation orientation directly influenced a performance

The comparison of the analysis results between quantitative and qualitative research showed that the qualitative findings were consistent with the quantitative findings in all research hypotheses.

### **DISCUSSION**

A study on the causal influence of elderly care entrepreneurs in Thailand had new findings which can be discussed as follows:

The analysis result of respondents' opinions towards entrepreneurship was at a high level. The executives must prioritize driving the organization to gain competitive advantages.

This is consistent with the concepts of Covin and Slevin (1989), Lamkin and Dess (1996)[13], and Frese (2000)[8], consisting of 3 components: risk-taking, proactive action, and intense competition.

Next, the analysis result of the respondents' opinions towards marketing orientation was at a high level. This is consistent with the concept of Narver and Slater (1990)[16], consisting of 3

components: customer orientation, competitor orientation, and inter coordination in the organization. It can be seen that marketing orientation mainly pursues what the customer needs and makes customers satisfied, resulting in good business performance.

The analysis result of the respondents' opinions towards innovation orientation was at a high level. This is consistent with the concepts of Avlonitis et al., (1994)<sup>[1]</sup>, North and Smallbone (2000)<sup>[17]</sup>, Wang and Ahmed (2004)<sup>[24]</sup>, consisting of three components: product innovation, process innovation, and marketing innovation. It can be seen that innovation orientation can create a successful and sustainable organization and reduce operating costs. Innovation would be the answer in today's business operations.

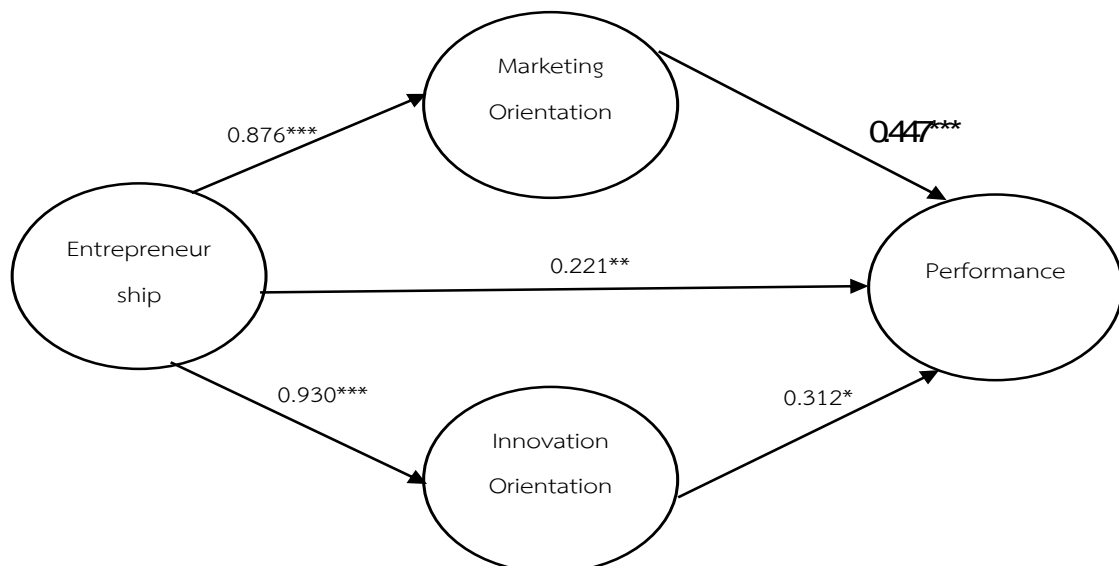
The analysis result of the respondents' opinions towards a performance was at a high level. This is consistent with the concepts of Kohli and Jaworski (1990)<sup>[11]</sup>, Narver and Slater (1990)<sup>[16]</sup>, consisting of 3 components: market share, sales growth, and profitability. It can be seen that

performance is an indicator of the success of the organization in the final stages of business operations. The organization will be successful if the organization's management meets the goals and objectives from the strategies of the organization to drive the organization to have good performance.

According to a study on the causal influence of elderly care entrepreneurs in Thailand, entrepreneurship had a direct influence on marketing orientation and innovation orientation. Entrepreneurship also had a positive direct influence through marketing orientation to performance. Also, entrepreneurship also has a positive influence through innovation orientation on the performance of the elderly care business in Thailand.

Based on the findings of this study, a new body of knowledge was created, called the model of the performance of the elderly care business as shown in Figure 3.

Note : \*\*\* Statistical significance of 0.001, \*\* Statistical significance of 0.01\*Statistical significance of 0.05



**Figure 3: Direct and Indirect Relationship and Influence of Factors**

From Figure 4, the model of the performance of the elderly care business relies on entrepreneurs or executives in driving the business to have good performance in accordance with the goals set.

It can be seen that entrepreneurship directly influenced marketing orientation. Empirical data support the research hypothesis and, it is consistent with the study by Jorge Gomez (2010), reporting that market orientation was an



important tool for developing non-specialized entrepreneurs to run their businesses under a risk basis. A study by Boso et al., (2013) stated that marketing orientation is a strategy used as a medium to predict future consumer trends quickly and is a suitable strategy for the business to optimize performance.

It can be seen that entrepreneurship directly influenced innovation orientation. Empirical data supported the research hypothesis and it is consistent with the study of Heng Liu et al., (2011) finding that product innovation results in entrepreneurs' good performance since elderly care business entrepreneurs need to employ knowledge in various fields both inside and outside the business to develop innovations in the business.

As for entrepreneurship and performance, it was found that empirical data supported the research hypothesis. This means that entrepreneurship directly influenced the performance of elderly care business entrepreneurs in Thailand. This is in line with the study by Fernando et al. (2011) who found that entrepreneurial potential influenced the business success and Di Zhang and Bruning (2011) found that entrepreneurial traits, such as knowledge, competence, belief control within one's own, and entrepreneur's strategic planning positively influenced business performance.

As for market orientation and performance, empirical data supported the research hypothesis and it is consistent with the study by Gaur et al., (2011), reporting that customer orientation, competitor orientation, and inter coordination in the organization are key tools for good business performance. This is also in line with Laukanen et al., (2013) who found that marketing orientation had a positive effect on the efficiency of organizational growth as well.

As for innovation orientation and performance, empirical data supported the research hypothesis and it is consistent with the study by Yahya et al., (2013) finding that innovation had a positive influence on performance in SMEs, which is in

line with a study by Moghaddam et al., (2013) that innovation makes organizations achieve sales growth. Thus, innovation orientation is a key business tool.

## **BENEFITS AND SUGGESTIONS**

### **I. ACADEMIC BENEFITS**

1.1 Academics or researchers who are interested in the elderly care business can utilize the findings to promote entrepreneurs to have knowledge and understanding of entrepreneurship, marketing orientation, and innovation orientation to create good performance and achieve business goals.

1.2 The conceptual framework of the structural equation should be applied based on this research hypothesis by using non-statistical insignificant variables to study other businesses.

### **2. BUSINESS BENEFITS**

2.1 To improve the management of the elderly care business, executives should focus on or study the future trends of the business to see what strategies can be used to drive business success under the circumstances of today's changing business environment.

2.2 Elderly care business entrepreneurs should create a good image for customers with efficient management through marketing orientation and innovation orientation from the acceptance of both internal and external stakeholders.

## **SUGGESTIONS**

### **I. ACADEMIC SUGGESTIONS**

1.1 Public sectors should support elderly care business entrepreneurs in Thailand for various countries to stay in Thailand since it will bring more income into the country.

1.2 Public sectors should arrange training and seminar by giving knowledge to elderly care business entrepreneurs in preparing for business operations under a new way of life to drive business success.

### **2. SUGGESTIONS FOR FUTURE RESEARCH**

2.1 The researcher's hypothetical structural equation conceptual framework should be applied to conduct research with other business entrepreneurs under different contexts to compare whether entrepreneurship, marketing orientation, and innovation orientation result in different outcomes.

2.2 Other factors affecting business performance should be studied since, in this research, the researcher was only interested in studying factors of entrepreneurship, marketing orientation, and innovation orientation. Therefore, there are other factors that affect performance, such as the internal and external environment of the business, knowledge management, etc.

## REFERENCES

- [1] Avlonitis, G.J., Kouremenos, A., & Tzokas, N. (1994). Assessing the innovativeness of organizations and its antecedents: Project innovatrat. *European Journal of Marketing*, 28(11), 5-28.
- [2] Best, J.W. (1981). *Research in Education* (4th ed.). New Jersey: Prentice Hall, pp. 182.
- [3] Chen, J., Murayama, S., & Kamibepu. (2010). Factor related to well-being among the elderly in urban China focusing on multiple roles. *Bioscience Trends*, 4(2): 61-71.
- [4] Covin, J.G., & Slevin, D.P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10:75-87.
- [5] David Di Zhang, Edward Bruning. (2011). Personal characteristics and strategic orientation: entrepreneurs in Canadian manufacturing companies. *International Journal of Entrepreneurial Behaviour & Research*, 17, 82-103.
- [6] Department of Business Development. (2020). *Business Analysis :Elderly care business*. [Online] Available: [https://www.dbd.go.th/download/document\\_file/Statistic/2563/T26/T26\\_202003.pdf](https://www.dbd.go.th/download/document_file/Statistic/2563/T26/T26_202003.pdf) [2020, December 26].
- [7] Fernando, P.B., Armengot, C.R. and Martín, M.G. (2011). Entrepreneurial success and human resources. *International Journal of Manpower*, 32, 68-80.
- [8] Frese, Michael. (2000). *Success and Failure of Micro business Owners in Africa: A Psychological Approach*. United States of America: Greenwood Publishing Group.
- [9] Hair, J. F. Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (1998). *Multivariate Data Analysis*. (5th ed). Prentice-Hall, Englewood Cliffs, NJ.
- [10] Kerlinger, F. N. (1986). *Foundations of Behavioral Research* (3rd ed). New York: Holt Rinehart and Winston.
- [11] Kohli, A. K., & Jaworski, B.J. (1990). Market orientation: The construct, research propositions, and managerial implications. *The Journal of Marketing*, 1-18.
- [12] Likert, R. (1970). The Method of Constructing and Attitude Scale. In *Reading in Fishbein*.
- [13] Lumpkin, G. T. and Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), pp.135-172.
- [14] Long, G. T., & Pfau, W. D. (2009). *Aging, poverty and role of a social pension in Vietnam*. Development and Change. Oxford : Blackwell Publishing.
- [15] National Board of Elders (2010). *National Plan for the Elderly of Thailand ,Issue 2 (2002-2021)*. Bangkok : Thepphenwanich.
- [16] Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *The Journal of Marketing*, 20-35.

- [17] North, D., & Smallbone, D. (2000). The innovativeness and growth of rural SMEs during the 1990s. *Regional Studies*, 34(2), 145-157.
- [18] Schumacher, R.E., and Lomax, R.G. (1996). *A Beginner's Guide to Structural Equation Modeling*. New Jersey: Lawrence Erlbaum Associates.
- [19] Saito, E. , & Sagawa, Y. (2005). Social support as a predictor of health status among older adults living alone in Japan. *Nursing and Health Sciences*, 7: 29-36.
- [20] Suchart Prasitratthasin and Kannikar Sukkasem. (2004) *Qualitative Research Methods: Research on Current Problems and Research on Future Times*. Bangkok : Feung Fah Printing.
- [21] Taylor, W. A. & Wright, G. H. (2003). A longitudinal study of TQM implementation: factors influencing success and failure. *Omega*, 31(2), 97-111.
- [22] Yaowapa Pathomsirikul. (2012). *Marketing Communication and Behavior in Health Care Market*. Eastern Asia University Academic Journal, Year 2, Issue 2 July-December, pages 1-12.
- [23] Yu, Y., Chamorro-Premuzic, T., & Tani, I. (2008). Personality and health in Japanese older adults. *Aging and Mental Health*, 12: 382-388.
- [24] Wang, C. L., & Ahmed, P. K. (2004). The development and validation of the organizational innovativeness construct using confirmatory factor analysis. *European Journal of Innovation Management*, 7(4), 303-313.
- [25] Wiphan Prachuapmoe and team. (2008). *A Study Report on the Structure of the Monitoring and Evaluation System of the National Elderly Plan, Vol. 2 (2002-2021)*. Bangkok: Chulalongkorn University.
- [26] World Health Organization. (2011). *Global Health and Aging*. NIH Publication no.11-7737. [Online] Available: [http://www.who.int/ageing/publications/global\\_health.pdf](http://www.who.int/ageing/publications/global_health.pdf).