UTCC IJBE
International Journal of Business and Economics
VOLUME 13 NUMBER 3, DECEMBER 2021

Content Page

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

SUCCESS FACTORS OF DRIED LONGAN ENTREPRENEURS IN LUMPHUN PROVINCE

Kanokon Sribhunpeng[1], Pichaphob Panphae[2] and Ravee Art Phoewhawm[3]
[1]Master's degree student, Rajamangala University of Technology Lanna, Chiang Mai
[2]Faculty of Business Administration Rajamangala University of Technology Lanna, 128 Huay Kaew Road, Chang Phueak, Mueang, Chiang Mai 50300 Thailand
[3]International Business School, Chongqing Technology and Business University, Xuefu Street, No.19, 400067, Chongqing, China
[1]ging.kanokon@gmail.com, [2]pichaphob.pla@gmail.com, [3]rtcm999@yahoo.com

Abstract

The aim of the research was to study operational and success factors of dried longan businesses. This research was done in a quantitative method. The population and samples were 48 entrepreneurs making dried longan who were registered with the Ministry of Commerce in Lamphun Province. A questionnaire was conducted to collect data. Several descriptive statistics were applied e.g, frequency, percentage, mean, standard deviation (SD). Inferential Statistics was Correlation Coefficient (Pearson's product moment correlation coefficient).

The result of the research indicated that (1) Average mean of level of importance towards internal factor were from outbound logistic ($\bar{x}$ = 4.302), production and operation activities ($\bar{x}$ = 4.267), inbound logistic ($\bar{x}$ = 4.236), infrastructure ($\bar{x}$ = 4.208), services ($\bar{x}$ = 4.125), marketing and sale ($\bar{x}$ = 3.971), human resource management ($\bar{x}$ = 3.920), and research and development ($\bar{x}$ = 3.861) respectively. (2) Average mean of level of importance towards external factor were from economic ($\bar{x}$ = 4.222), environmental ($\bar{x}$ = 4.094), legal and regulations ($\bar{x}$ = 3.969), technology ($\bar{x}$ = 3.667), political ($\bar{x}$ = 3.646) and sociocultural ($\bar{x}$ = 3.615) respectively. (3) Average mean of level of importance towards success factors were from customer perspective ($\bar{x}$ = 4.250), internal business process ($\bar{x}$ = 4.049), financial perspective ($\bar{x}$ = 3.986), and learning and growth ($\bar{x}$ = 3.927) respectively. Result of hypothesis showed that (1) internal factor in terms of production and operation activities had no positive relationship to all success factors, and (2) internal factor in terms of marketing and sales, research and development, and infrastructure had positive relationship to all success factors.

Keyword: Balanced Scorecard, Dried Longan, Entrepreneurs, PESTLE Analysis, Success Factors, Value Chain

Introduction

Longan is an economic crop and popular among Thai and foreign consumers. Agriculturists are increasingly planting longan during August and early September which are considered as harvesting time. The plan has always been to flood the market by the ton but the overload will be too much for fresh consumption on part of the buyers, thus leading into the price being lowered for longan products. The processing of longan into various products, while being preserved for a long time and maintaining the original flavor, will help keep the price stable and increase agriculturists' income from the production. Moreover, the longan processing market has a greater role and can support up to 40% of longan production. The eight important planting areas are located in the provinces of Lampang, Lamphun, Phrae, Nan, Tak, Phayao, Chiang Mai, and Chiang Rai, which have provided the value of more than twenty billion Baht. (Office of Agricultural Economics, Online)

According to the situation of longan production, there was a demand for longan in the season of 2017; the northern region needed longan in the amount of 376, 340 tons, and demand for processing was 255,881 tons. In the management of longan in 2017.

The Ministry of Agriculture and Cooperatives management of longan in 2017 had prepared approximately 194, 522 tons of longan in the season, which had a lot of products coming to the market from 1 - 20 August 2017. All eight provinces had planned to manage the longan in accordance with the guidelines for fruit management in 2017, that included quality and quantitative management, with a committee to solve agricultural problems from production. The committee is the main backbone of the institution overseeing the longan management plan. The processing of dried longan is about 60% due to the high demand with resources to support the fresh produce from agriculturists. The production of fresh longan for export and domestic consumption was going good together in the right direction at 30 percent and above, while the remaining 10 percent would process longan for adding value (Matichon, Online).

As for marketing, fresh longan had prices risen continuously since the beginning of the season. The starting price begins in early July and kept on increasing from that time period. When prices have been determined for the market to sale the products are released in large quantities. The price remains cheap, but at a satisfying price level for agriculturists to make ends meet. At the end of the harvest season, the quality of the products begin to decline and become extremely ripe, however, the price of goods bought from the factories or traders was still considered to be higher than the previous year. It can be seen that longan is the economic fruit of the north in mass quantity. Longan business entrepreneurs are involved with the market system and longan price mechanism. The government should have a policy to support the working capital for Thai entrepreneurs in operating in longan businesses for reducing the monopoly of foreign entrepreneurs, and should create cooperation between the government sectors and entrepreneurs in labor-management (Office of Agricultural Economics, Online).

Table 1 Exports of Fresh Longan and Processed Products 2015 - 2018

Export (Ton / Million Baht) / Year	**2015**	**2016**	**2017**	**Jan - May 2018**
Quantity of fresh and frozen longan	357,252	415,895	726,428	258,369
Value of fresh and frozen longan	9,753	11,616	20,971	8,571
Dried Longan	196,666	125,518	213,981	98,735
Value of Dried Longan	5,426	8,440	11,110	1,994
Partner countries				
Fresh longan	Vietnam 53%		China 25%	
Frozen longan	Hong Kong 64%		Japan 36%	
Dried longan	Vietnam 64%		China 31 %	
Transformation rate	Fresh longan 100 kilograms: Dried longan with shell 33.33 kilograms		Fresh longan 100 kilograms: Dried longan flesh 10.00 kilograms.	

Source: Department of Internal Trade Ministry of Commerce. (2018).

Table 1 shows the quantity and value of Thailand's longan exports, which exported more than 500,000 tons per year and generated a revenue of over 40,000 million Baht per year. The top two major export markets were Vietnam and China. The volume of fresh longan exports to Vietnam was 53%. The volume of dried longan exports to Vietnam accounted for 64 percent, while China's volume of fresh longan exports was 25 percent. The number of dried longan exports to China was 31 percent of the total export volume.

Office of Agricultural Economics, and Ministry of Agriculture and Cooperatives disclosed the study results on the impact of Thai longan entrepreneurship in 2018 to analyze the operating characteristics, management model of entrepreneurs, packing house for fresh longan, and drying the whole longan with its shell to analyze the market margin and profit proportion affecting the economic system of the Thai longan export business. It was found that entrepreneurs in the packing house (Lhong) to buy longan for export in the production facility were certified by the GMP, and operates business and management in the form of a (1) packing house of Thai entrepreneurs; (2) packing plant that Thai entrepreneurs share with foreign entrepreneurs; (3) packing plant owned by foreign entrepreneurs (Office of Agricultural Economics, Online).

The annual longan production generates income for Thailand and many agriculturists. The number of households planting longan as economic crops as of 2nd June 2020 is 110,164 households. This number of households has an direct impact on the economy of longan growers. The big data from the Ministry of Agriculture and Cooperatives (http://agri.oae.go.th/bigdata/dasboard/productlongan) points out the income from the dried longan exported to foreign countries has increased every year. The value of dried longan exports beginning from January to May, 2020 was 1,082.9366 million Baht, even though the season has not yet been reached and did not have many off-season longans.

The researcher is therefore interested to study the business model and management of the dried longan business entrepreneurs in Lamphun province by applying the Balanced Score Card theory as an indicator to know what important factors lead to the business operations successful, the problems and obstacles encountered, and the working guideline for other entrepreneurs to study further and applying it to be more successful for the benefit of entrepreneurs and agriculturists as a whole.

Objectives of the study

1. To study the operational model and success factors of dried longan businesses

2. To provide a guideline for being successful in the operation and promotion of the dried longan business.

Review literature

Demographic concepts

People with different demographic characteristics will differ in psychological characteristics (Satavatin, 1990) by analyzing from the following factors: (1) Gender differences make people behave, communicate differently and in different ways of thinking about values and displaying their attitudes; (2) Age is a factor causing differences in thought and behavior. Young people tend to have liberal ideas, meanwhile older people tend to have conservative ideas; (3) Education is a factor that causes people to have very different opinions, values, attitudes and behaviors in terms of being a knowledgeable and understandable person; (4) Socioeconomic status, occupation, income and social status of a person have a significant influence on the reaction of the messenger. According to the mentioned concepts and theories of demography, the researcher has thereupon brought this concept to be applied as a guideline in the study and considered this as the basis for determining the personal factors of entrepreneurs.

Concept and theory of general environment analysis: PESTLE Analysis)

Aguilar (1967) stated that the General Environment Analysis consists of Polities, Economic, Social/culture, Technological, and Ecological. PESTLE Analysis is consistent with Francis J. Aguilar's PESTLE analysis in 1967 (Bright hup PM project management, 2011) and PESTLE analysis history and application, CIPD. (Retrieved 2020-6-30). PESTEL analysis is a useful tool for analyzing and understanding the "overview" of the environment in which the business is about to operate and to think about the opportunities and threats within the new business area for understanding the environment in the new area. Also, one must plan to seek for opportunity and reduce the threats.

Concept and theory of value chain

Michael E. Porter, from of Harvard Business School, introduced the concept of a value chain in his book "Competitive Advantage: Creating and Sustaining Superior Performance" (https://www.investopedia.com/terms/v/valuechain.asp)

Yanyong Srisom (2010) said that the value chain refers to two activities related and connected to add value to production factors as the following:

1. Primary Activities involve production or service, marketing, and freights or services to consumers consisting of: (1) Procurement of raw materials, conveyor, transportation, inspection, storage, and distribution of raw materials. (2) Production and conversion of raw materials into products or services (3) Product distribution, collection, and distribution of furnished products to customers. (4) Marketing and sales, advertising activities, and distribution channels. (5) Services to add value or maintain products with regards to after-sales service.

2. Support Activities consist of: (1) Infrastructure, planning, and system construction. (2) Human resource management, and training and development of knowledge and skills. (3) Technological development that is adding value to products and services. (4) Procurement of production factors, machinery, equipment, and establishing good relationships with suppliers.

Concept and theory of balanced scorecard: BSC

The concept of a Balanced Scorecard application tool to measure organizational performance is a concept introduced by Professor Robert S. Kaplan of Harvard University and David P. Norton in 1996. They presented the concept of measuring business performance in a new way that will enable top executives to better manage the business. The Balanced Scorecard tool application for measuring organizational performance support top executives in administrating business with better performance results. Kaplan () believes that "*If the work cannot be measured, then the executive cannot manage*", and “*when we measure something, that will probably happen*." Consequently, performance measurement is significant. The proposed concept is to measure the performance of important issues and covers information in the related areas. Apart from financial measures, as the occurring operational results, there should be a measure of the administrative process creating customer satisfaction, as well as creating innovation and learning for the organizations to increase the competitive ability in creating their own future. The managers will be able to clearly assess the overall potential of the organization and its competitiveness and future with this concept (Kaplan and Norton, 1996). Additionally, Pasu Decharin (2004) said that "*the Balanced Scorecard as a strategic management system*" is the translation of the vision, mission, and organizational strategy into a set of successful measures defining the framework for strategic measurement and management systems. It stimulates organizational development and change management in measuring organizational success in two dimensions: financial objectives and unbalanced finance. We will consider the scorecard as the following: (1) A tool for management to adjust the balance and focusing on both short-term financial aspects, and long-term perspectives on organizational learning and development. (2) A customer perspective that reflects the organization's awareness of what customers expect or want. (3) A balance between increasing revenue and cost control. (4) A balance between rational indicators and effective indicators.

According to related theories and research, lead to the research framework as follows:

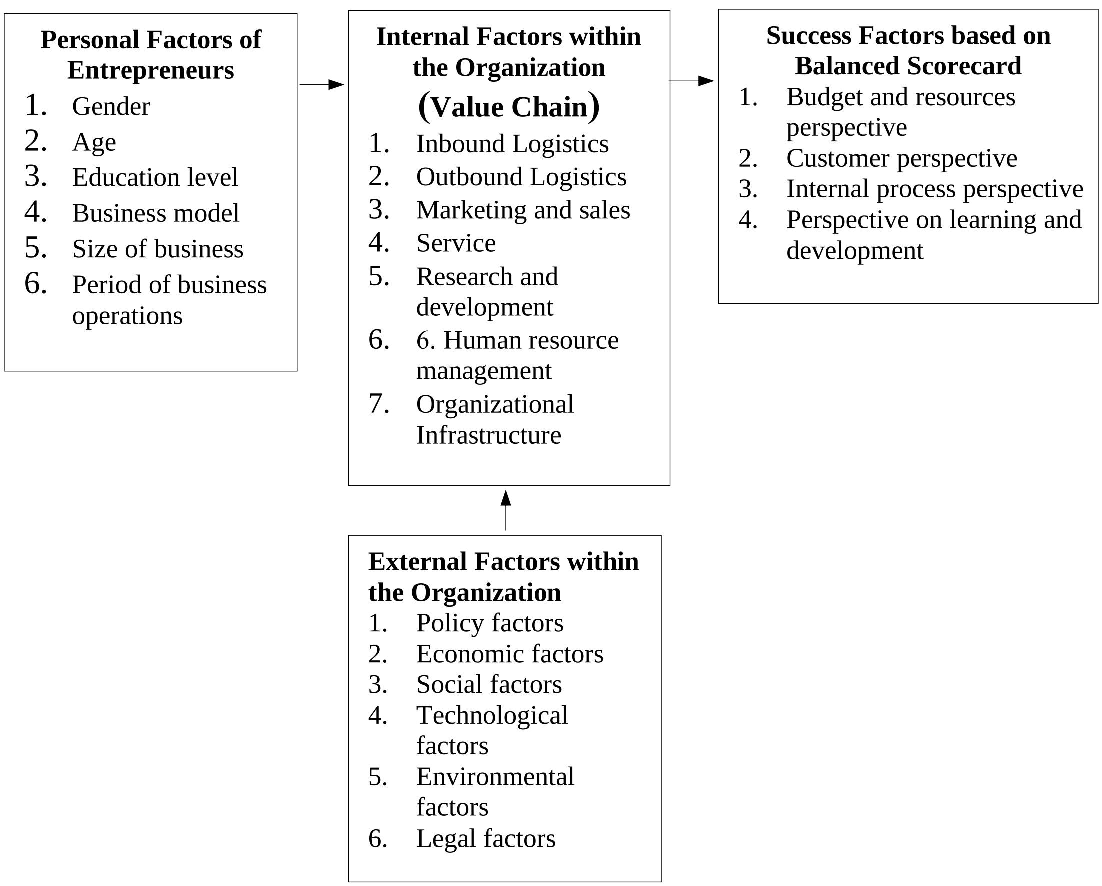

Figure 1 Conceptual framework

Research hypotheses

1.The differences in demographic characteristics as gender, age, education level, business model, size of the business, and duration of business operations have different mean levels of importance to factors within the organization.

2.External organizational factors have a positive relationship with internal organizational factors.

3.Internal organizational factors have a positive relationship with the success of the operation.

Research methodology

Population and sample

The population sample was 48 entrepreneurs involved in the dried longan businesses in Lamphun province that was registered with the Lamphun Commercial Office (Lamphun Provincial Commercial Office, 2018). Because of the small number of samples, the researchers chose to study from a total population of 100%. The duration to collect the data was from June 2019 - March 2020

Research tools

A closed-ended questionnaire with a checklist was used for data collection. It was divided into (1) a general information of the questionnaire, (2) an information of entrepreneurs' opinions regarding the importance level of information about internal factors, (3) data, opinions about the business operating environment and external factors affecting the business operations, and (4) suggesting guidelines on factors affecting business operations. The questionnaire was analyzed for content validity and had an IOC assessment of every question greater than 0.66. It showed that all questions were accurate in content and had a consistency between the questions and the characteristics of the research objectives that need to be measured. Moreover, it was tested for reliability with the Alpha Cronbach Coefficient by selecting questions with an Alpha value of 0.7 or more (Cronbach, 1984).

Data analysis

Descriptive Analysis is used to explain the performances or characteristics of the variable data distribution by statistical package program for the measurement set to be used for statistics, namely Frequency, Percentage, Mean, and Standard Deviation. Hypothesis testing was applied with Pearson's product-moment correlation coefficient (r) (Kanlaya Vanichbancha, 2006).

Research findings

Demographic data of the respondents

Findings showed that most of the respondents were 24 females, equal to 50 % and 24 males as 50% in the same proportion, aged between 41 - 50 years, a total of 27 people, representing 56.30%. They were 29 undergraduates, accounting for 60.40%. 29 people had a limited company business accounting for 60.40% with small enterprises. The number of employments was less than 50 people: a total of 27 employees, representing 56.30%. The duration of running a business was between 6 - 10 years as 21 people, accounting for 43.80 percent, respectively.

Information about internal factors (Value chain)

The overall opinions on outbound logistics were at the highest level ($\bar{x}$ = 4.302, S.D. = 0.541). When scoring each item in descending order, it was found that there was a warehouse for storing dried longan ready to be sold ($\bar{x}$ = 4.438, SD = 0.580), there is a systematic process for storing dehydrated longan with systematic distribution ($\bar{x}$ = 4.333, SD = 0.724), the control of the quantity of ready-to-use dried longan ($\bar{x}$ = 4.271, SD = 0.736), and the preserving process of the dried longan for distribution ($\bar{x}$ = 4.167, SD = 0.753).

The overall opinions on activities related to production and operation were rated as the highest for the importance level ($\bar{x}$ = 4.267, S.D. = 0.518). The order of ranking score from highest to lowest for each subject are as followed:

1. Standardized control of ready-to-use dried longan processing ($\bar{x}$ = 4.313, SD = 0.512).
2. Management methods in the production or processing of ready-to-sell dried longan ($\bar{x}$ = 4.292, SD = 0.582).
3. Method to control the quantity and quality of the ready –to- sell dried longan ($\bar{x}$ = 4.292, SD = 0.651).
4. Process of storing the ready –to- sell dried longan ($\bar{x}$ = 4.250, SD = 0.786).
5. Packaging format of dried longan ($\bar{x}$ = 4.188, SD = 0.867).

According to inbound logistics, the overall important level was at the highest level ($\bar{x}$ = 4.236, S.D. = 0.663). Considering the scores of each item in descending order found that there was a focus on the inspection and control of raw materials in terms of quality and quantity ($\bar{x}$ = 4.292, SD = 0.713), a selection of suppliers and sources of raw materials ($\bar{x}$ = 4.292, SD = 0.824), and a control criteria for the efficient transportation of raw materials from various sources such as transportation control of time ($\bar{x}$ = 4.125, SD = 0.866).

In the overall opinions on organizational infrastructure, the importance level was at the highest level ($\bar{x}$ = 4.208, S.D. = 0.683). As scoring from highest to lowest, it indicated that there was a systematic allocation of funds for audition ($\bar{x}$ = 4.250, SD = 0.786), financial and accounting management ($\bar{x}$ = 4.188, SD = 0.762), and good financial planning for both short-term and long-term ($\bar{x}$ = 4.188, SD = 0.867).

As for services, the overall opinions showed the level of importance was at a high level ($\bar{x}$ = 4.125, S.D. = 1.008). When scoring the items from high to low, it was found that there was process of product liability handling if an error occurs ($\bar{x}$ = 4.146, S.D. = 1.091), and a delivery service of the dried longan implemented for customers ($\bar{x}$ = 4.104, S.D. = 1.016).

With marketing and sales, the overall opinions revealed that there was a highest level of importance level ($\bar{x}$ = 3.971, S.D. = 0.749). When ordering each item the scores from high to low presented that there were regular sourced for selling dried longan ($\bar{x}$ = 4.292, SD = 0.874), the price setting for dried longan followed the marketing mechanism ($\bar{x}$ = 4.125, SD

= 0.914), individuals have their own distribution channel ($\bar{X}$ = 4.042, SD = 1.010), there are methods to inquire and make contact with customers ($\bar{x}$ = 3.833, SD = 0.834), and offering discounts or promotions to customers ($\bar{x}$ = 3.563, SD = 0.943).

For the overall opinions towards human resource management there was a high level of importance ($\bar{x}$ = 3.920, S.D. = 0.747). Ordering the high to low scores was revealed as having compensation and various benefits for employees ($\bar{x}$ = 4.021, S.D. = 0.758), having human resource management, such as assigning workloads, administration during labor shortage or during the off production period ($\bar{x}$ = 4.000, SD = 0.975), doing a follow-up evaluation of the employees' performance ($\bar{x}$ = 3.958, SD = 0.824) for production and management ($\bar{x}$ = 3.896, SD = 0.857), having methods to manage human resource issues in the organization ($\bar{x}$ = 3.833, SD = 0.753), and offering staff training ($\bar{x}$ = 3.813, SD = 1.085).

Research and development for overall opinions had a high level of importance ($\bar{x}$ = 3.861, S.D. = 0.810). When ranking the scores from high to low it showed that there was an application of technology using the processing of dried longan ($\bar{x}$ = 4.063, SD = 0.836), an application of technology for administration such as database storage or communication system ($\bar{x}$ = 3.979, SD = 0.812), and utilizing technology in transportation processes such as online product sign-up, and tracking delivery vehicles via GPS ($\bar{x}$ = 3.542, S.D. = 1.202).

Information about external factors

As economic factors, the overall opinions were rated as the highest level ($\bar{x}$ = 4.222, S.D. = 0.577). When having the descending scores from highest to lowest, it presented that the current economic situation in Thailand has affected the business operations ($\bar{x}$ = 4.292, S.D. = 0.651), business was affected due to the current global economic downturn, especially in big markets such as the United States, European Union and China ($\bar{x}$ = 4.271, S.D. = 0.765), and increase of entrepreneurs currently having an effect on the business ($\bar{x}$ = 4.104, S.D. = 0.881).

For environmental factors as the overall opinions, the importance level was at a high level ($\bar{x}$ = 4.094, S.D. = 0.589). When ranking each item scores from high to low it was found that environmental changes and disasters probably had an affect agricultural products, resulting in loss of balance between demand and supply of the product and having an effect on the business ($\bar{x}$ = 4.291, S.D. = 0.683), and taking into account the preservation of natural resources and environment affects the business, such as the use of firewood causing pollution or the usage of chemicals in fresh longan as raw materials for production ($\bar{x}$ = 3.900, S.D. = 0.778).

As legal factors, the overall opinions of the importance level were at a high level ($\bar{x}$ = 3.969, S.D. = 0.821). Considering the scores from highest to lowest revealed that labor laws, government policies (such as paying a minimum wage of 300 baht/day) affecting the business ($\bar{x}$ = 4.083, S.D. = 0.846) and trade laws of Thailand are consistent, modern, benefiting the business ($\bar{x}$ = 3.854, S.D. = 1.072).

The overall opinion of technological factors on the importance level was rated at a high level ($\bar{x}$ = 3.667, S.D. = 0.794). Scoring from high to low showed that the advancement of technology and convenience in information accessibility and online shopping can have an impact on the business ($\bar{x}$ = 3.688, S.D. = 0.903), and when there is insufficient labor market it resulted in the increase of labor costs, labor substitution with robots or automation can help the business increase productivity ($\bar{x}$ = 3.646, S.D. = 0.956).

The overall opinions on political factors indicated the importance level was at a high level ($\bar{x}$ = 3.646, S.D. = 0.707). In the order of each item scores from high to low it showed that the current political situation in Thailand affected the business ($\bar{x}$ = 4.125, S.D. = 0.761) and the government has a policy to support the dried longan entrepreneurs ($\bar{x}$ = 3.167, S.D. = 1.209).

According to social factors, the overall opinion on the importance level was at a high level ($\bar{x}$ = 3.615, S.D. = 1.213). It was found that the popularity of the new generation of consumers paid more attention to the choices affecting the business ($\bar{x}$ = 3.708, S.D. = 1.184). There is progress towards an aging society with health consideration, such as abstaining from consuming high-sugar fruits affects your business ($\bar{x}$ = 3.521, S.D. = 1.368).

Information about factors contributing the operational success (Balanced scorecard)

The overall opinions on customer perspectives on the importance level was at the highest level ($\bar{x}$ = 4.250, S.D. = 0.508). However, the order of each item scores from highest to lowest found that dried longans were fresh, in good quality, and served the needs of customers ($\bar{x}$ = 4.417, SD = 0.577). The products could be delivered to customers with convenience and speed ($\bar{x}$ = 4.229, SD = 0.592), and there is a convenient distribution location for customers ($\bar{x}$ = 4.104, SD = 0.881).

For the internal process perspective, the importance level was at a high level ($\bar{x}$ = 4.049, S.D. = 0.638). Scoring from high to low showed that the business had staff to be prepared for work ($\bar{x}$ = 4.208, SD = 0.824). The business had an efficient working system ($\bar{x}$ = 4.042, SD = 0.713) and the business had ongoing operational measurements and assessments ($\bar{x}$ = 3.896, SD = 0.722).

From a financial perspective, the overall opinions had a high level of importance level (x 86 = 3.986, S.D. = 0.781). Scoring from high to low indicated that there is sufficient working capital and reserves to fund the operations ($\bar{x}$ = 4.083, SD = 0.942). All financial problems could be effectively solved with all of the business steps ($\bar{x}$ = 3.979, SD = 0.758), future profits could be anticipated and financial plans could be adjusted to streamline the business operations at all times ($\bar{x}$ = 3.896, SD = 0.973).

Perspective on learning and organizational growth showed overall opinions with the importance level being at a high level ($\bar{x}$ = 3.927, S.D. = 0.812). Considering each item scoring from high to low presented that the business had staff training to increase knowledge and understanding of work ($\bar{x}$ = 3.938, S.D. = 0.836), and the business had introduced new techniques and technologies for regular business development ($\bar{x}$ = 3.917, S.D. = 0.895).

Summary of hypothesis testing

The results of the hypothesis testing of internal factors within the organization positively correlated with factors affecting the success of operations. The study found that (1) internal factors, as production and operation activities, had no positive relationship with all success factors. (2) internal factors as marketing and sale, research and development, and infrastructure had a positive relationship with all success factors.

Discussion

Internal factors within the organization (Value chain)

The work showed that the factors of outbound logistics relating to production and operations, inbound logistics, and organizational infrastructure were crucial for organizations to conduct their business affairs. A high level of importance included services, marketing and sales, human resource management, and research and development. The study is consistent with the findings of Wisitnithikitja et al. (2016) research on "Successful Factors of Crain Business in Thailand" which showed that marketing overview was at a high level, followed by management, human resource, and finance respectively. Tonson (2016) research on "The Approach to Develop Value Chain to Enhance the Management Efficiency of Thai Tour Operators to Support Free Trade within the Framework of ASEAN Cooperation" prioritized the activities of value chain that included; (1) human resource management, (2) marketing and sales, (3) customer services, (4) company infrastructure, (5) technology development (6) input factors, (7) procurement for services, (8) operational processes, and (9) quality of work before delivering services to customers, were all aligned with the results. Moreover, with Johan's (2012) previous study on the success factors of small and medium business entrepreneurs, in the Gnosjo municipality area, the research findings also had some compatible values based on the internal factors, the operations of the company, and external factors which influenced the success of the SMEs in the Gnosjo municipality.

External factors within the organization

Results showed that respondents rated the highest level of importance as economic factors, and the high importance for environmental factors, legal factors, technological factors, political factors, and social factors**.** It is not consistent with Changtang's (2009) work on "The Study of External Environmental Factors Affecting Real Estate Operators", which found that the factors affecting real estate entrepreneurs included political stability, government monetary policy, basic government utility policy, legal factors, economic factors and economic conditions, technological factors, and the form of consumers' demand for housing. Additionally, Wangbenmad and Bindulem **(**2014**)** work on **"**Business

Environmental Factors Affect Success of Small and Medium Enterprises(SMEs): Empirical Evidence from Hatyai, Songkhla", found that both internal and external factors of the business as personnel systems, financial systems, marketing systems, management systems, customer system management, competition systems, economic systems, political and legal systems, and technology systems were important to the external factors of SMEs which had an influence on the success of business operations registered with the Songkhla Business Development Office. Moreover, Prapakornwimol (2009) research on the "Adaptation of Thai industry towards green logistics" showed that the external factors mostly contributed in the adaptation towards green logistics customer and market factors, followed by legal factors, competitive factors, and social factors respectively.

Factors contributing the operational success (Balanced scorecard)

The work showed that respondents valued the Balanced Scorecard at the highest level of feedback for the customer perspective, and there was a high level of feedback for the internal process perspective, financial perspective, and perspective on learning and organizational growth which is in line with Thanatharnchuchote (2018) research on "Effective business model of industrial plants in Pathum Thani Province" which found that there was an overall effectiveness of business operations with regards to applying the Balanced Scorecard method in all aspects. The most effective aspect was customers, finance, learning and development, and internal operational processes, respectively. Meanwhile, Dissorn (2016) study on "Factors Affecting Successful Implementation of Balanced Scorecard of Companies In Bangkok Metropolitan" revealed that respondents retorted to the balanced evaluation of the organization at a high level for the internal process perspective, customer perspective, budget, and resource perspective. The highest level of opinions was the perspective on learning and development. According to the study by Suthipong (2015) on "Relationship between the Situation Factors and the Level of Indicators Usage in all 4 Aspects of BSC and the Performance of the Health Promotion Hospital in the Southern Border Provinces" the work found that customer operation and internal operations were at a high level. The financial aspect, and learning and growing aspects were at a moderate level.

Recommendations

1. The entrepreneurs should focus on outbound logistics, activities related to production and operation, outbound logistics as well as the organizational infrastructure due to the mentioned factors having had the greatest impact on the success of any business. They will help promote the internal process of the business to become a more robust system. At the same time, there should also be a consideration for the aspects of service, marketing and sales, human resource management, and research and development, such as creating discounts or promotions, monitoring, and evaluation of employee performance;

which includes the use of technology in the transportation process to develop the organization's potential for higher growth in the future and to increase stability in internal processes.

2. The entrepreneurs should pay more attention to external factors in all aspects that are uncontrollable. However, they should monitor and be cautious in finding ways to prevent and develop their operations to avoid having a negative effect on the business, especially with environmental factors. They can prepare on preventing the effects of environmental changes and disasters that may affect agricultural products, spoil the balance of demand and supply of produce. Moreover, they should consider the preservation of natural resources and environment that may influence the business, such as the use of firewood causing pollution or the use of chemicals in the production of fresh longan as raw materials.

3. As for the factors contributing to the success, the entrepreneurs should focus on the customer perspective and internal process perspective. Therefore, they should pay attention to the quality of dried longan that is fresh, in good quality that serves the customers' needs, and deliver products to customers quickly in order to improve the competitive position and being more reliable. From the process perspective, the entrepreneurs should focus on allowing employees to prepare for work as the beginning step and as quickly as possible for making the operating system more efficient. The aim is to assist on enhancing efficiency of the workplace and prevent the operating system from making mistakes or causing damage to the business.

References

Bright Hub PM Project Management (2011), PESTLE Analysis History and Application.From http://www.brighthubpm.com/project-planning/100279-pestle-analysis-history-and-application/PESTLE analysis history and application, CIPD accessed 30 June 2020.

Changtaeng, C. (2009), "The Study of External Environmental Factors Affecting Real Estate Entrepreneurs", Master of Engineering Thesis, King Mongkut's University of Technology Thonburi.

Department of Trade under the Ministry of Commerce. Longan. Available: http://kbp.ops.moc.go.th/ewt_dl_link.php?nid=1105. 28 August 2019.

Eriksson Johan. (2012), Success Factors of Entrepreneurial of Small and Medium-Sized Enterprises in Gnosjo Municipality. Master's Thesis, School of Sustainable Development of Society and Technology International Marketing (MIMA).

F. J. Aguilar, (1967), Scanning the Business Environment. New York: Macmillan.

Kaplan, S. R. and D. P. Norton. (1996). The Balanced Scorecard: Translating Strategy Into Action. Boston: Harvard Business School Press.

Kalaya Wanichbancha (2006), Statistics for Research 2nd Edition, Bangkok, Chulalongkorn University Press.

Lamphun Provincial Commercial Office (2018), Dried longan entrepreneurs. [CD]. Lamphun: Lamphun Provincial Commercial Office.

L. J. Cronbach, (1984), Essentials of Psychological Testing. 4th Ed. New York, NY: Harper & Row.

Matichon Online (2017), Situation of Longan Production in 2017, Managed Systematically Does Not Affect Productivity - Price. From https://www.matichon.co.th/publicize/news_587446 accessed 31 January 2020.

Ministry of Agriculture and Cooperatives - Big Data. From http://agri.oae.go.th/bigdata/dasboard/productlongan accessed 29 June 2020.

NESDB Revealed the Results of the Study of Thai Longan Entrepreneurs on the Economy and Employment System. From http://newweb.oae.go.th/view/1/ News from _ ERA / News% 20 NESDB / 29931 / TH-TH. accessed on September 1, 2019.

Pasu Decharin (2004), Road from Strategy to Action with Balanced Scorecard and Key Performance Indicators 12th Edition, Bangkok, Chulalongkorn University Press.

Prama Stawatin (1990), Communication Arts 7th Edition, Bangkok Prints.

Siridissorn, A. (2017), Factors Affecting the Success of the Balanced Scorecard Applications of Companies in Bangkok Metropolitan Region. *Academic Journal Graduate School Suan Dusit, Vol. 12, No. 1*, pp. 59-66.

Sirinthip (2009), "Adaptation of Thai Industry to Green Logistics", Master of Science, Chulalongkorn University. Office of Agricultural Economics.

Srisom, Y. (2010), Value Chain in Logistics. From http://www.tpa.or.th/publisher/images/abstract/abstech151.pdf. accessed 1 September 2019.

Suthipong, N. (2015), "Relationship between Situational Factors and the Level of Use of BSC's 4 Indicators and Results of Sub-District Health Promoting Hospitals in Southern Border Provinces", *Songkhla Nakarin Vejsarn, Vol. 33, No. 5*, pp. 227-246.

Thanatarnchuchhot, T. (2016), Effective Business Operation Model of Industrial Factory in Pathum Thani Province. *Academic Journal*, *Suvarnabhumi Institute of Technology,Vol. 4*, *No. 1*, pp. 207-219.

Tonson, Y. (2016), "Value chain development guidelines to enhance the management potential of Thai travel agencies to support trade liberalization in accordance with the ASEAN Cooperation Framework", *BU Academic Review, Vol. 15*, *No. 1*, pp. 86-100.

Value Chain: Background. From https://www.investopedia.com/terms/v/valuechain.asp) accessed 1 July 2020.

Visitnithikija, C. and Tanaphan, I. (2017), "Factors for Success in Operating a Crane Business in Thailand", *Journal of Graduate Studies Suan Sunandha Rajabhat University*, pp. 247-256.

Wangbenmad, C. and Binduem, T. (2014), "Factors of Success of Small and Medium-Sized Businesses (SMEs) in Hat Yai District, Songkhla Province", *Journal of Management Science, Suratthani Rajabhat University, Vol. 1*, *No. 1*, pp. 109-124.

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

FACTORS AFFECTING CONSUMER INTENTION TO USE MOBILE PAYMENT AT PHYSICAL RETAIL PLACES IN HANGZHOU, CHINA

Yishan Pan[1] and Nattapan Buavaraporn[2]
[1,2]International School of Management, University of the Thai Chamber of Commerce. 126/1 Vibhavadi Rangsit Rd., Dindang, Bangkok 10400, Thailand
[1]453120381@qq.com, [2]nattapan_bua@utcc.ac.th

Abstract

This research aims to investigate the influential factors affecting consumers' intention to use mobile payment at physical retail places in Hangzhou, China. Base on Technology Acceptance Model (TAM). According to the model and theories, external variable of perceived risk, situational factor and social influence are added to build the conceptual framework model. Quantitative research method and primary data is used in this research. The scope of this survey is a random survey within the area of Hangzhou, China, the survey method adopted is the questionnaire survey.

The result shows: Perceived usefulness and perceived ease of use constitute two indispensable effects on the intention to use. Perceived ease of use also has a significant impact on perceived usefulness. Perceived risk has significant but negative impact on the intention to use. Besides, situational factors indirectly affect intention to use by influencing perceived usefulness and perceived ease of use.

Key words: Consumer, Intention to Use, Technology Acceptance Model, Mobile Payment Service, Physical Retail Places.

Introduction

Background of research

A rising mobile payment trend inevitably thrives mobile Internet and intelligent terminals. First, it leads to a growing mobile payment. With the mobile Internet era opened, people have transferred from the personal computer to the mobile terminal (like mobile phones, tablet, etc.), which carries consumer situations, so mobile payment evolves to be an essential role in mobile Internet era.

As the year of 2011, China's mobile payment compared to U.S. there is only twice amount of transaction scale. But in 2016, the gap became huge: Mobile payments in China were a $9 trillion market in 2016, according to iResearch, almost 80 times the size of the U.S. mobile-payment market of $112 billion, bases on data from research firm Forrester.

According to a report Beijing-based research consultancy Analysys released in April, 2017, China's online payment of the users has reached 531 million, increasing by 56.61 million to that the end of 2016, with a growth of 11.9% the online prepayment users is 68.8%. Mobile payment users, 527 million are growing in number; the annual growth is 12.3%. Mobile payment has leaped from 67.5% to 70.0%.

Statement of the problems

However, most consumers still watching and waiting towards mobile payments in offline situation. With the online mobile payment market being more and more saturated, the Mobile payment increment speed of growth has been slowing down as the following Figure 1 showed:

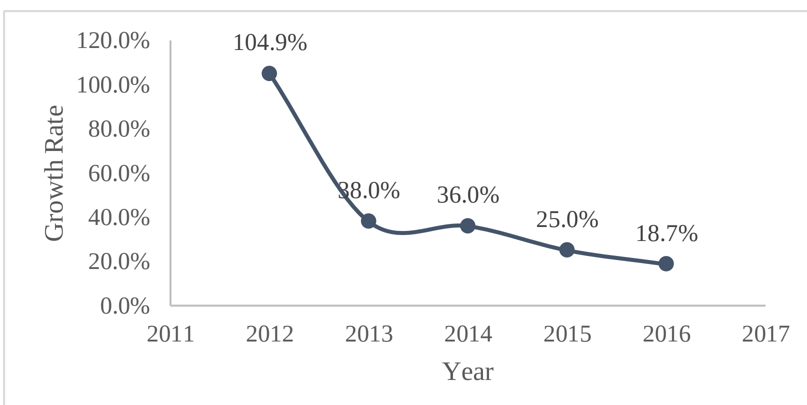

Figure 1 Year on year mobile payment growth rate

Different payment situations lead to significantly different consumer adoptions. Online payment means that consumers use mobile payments comes from the inevitably-chosen mobile online shopping and Internet finance. Physically retailing is derived from non-mobile payers accustomed to cash or bank card, credit card bill-arrangement. Additionally, the application of mobile payment security issues in physical retail places further causes more waiting-and-seeing consumers. Mobile payment has achieved success in providing subsidies and other marketing methods for widening consumers. Actually, more new users will enter "invalid accounts", presenting an insubstantial breakthrough. This study aims to identify the influential factors of consumer intention to use mobile payment.

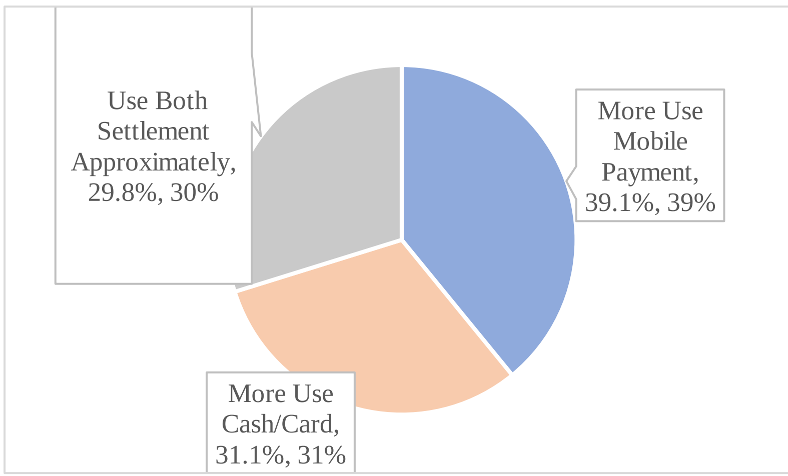

Figure 2 User settlement method of offline mobile payment

Significance of the study

Theoretically and practically, this research identified the impact factors of the consumers' intention in the offline payment scenario. Theoretically, despite some published researches on mobile payments, offline mobile payments is far from being perfect. The disparities in mobile payment purposes and environment between online and offline tends to lead consumers to all-sided thoughts. The research segments the mobile payment market by examining the influential factors the consumer's intention for further enriched and upgraded this theory.

Practically, based on mobile Internet promotion and mobile terminals popularity, mobile payment will penetrate all aspects of people's lives. With the growing competition, physical retail places is potential competitiveness for mobile-payment industry. However, the current market situation reveals the less anticipation value of their suppliers. It is valuable for the providers to explore the inflectional factors and an enhanced comprehensive payment industry.

Research Objectives

The objective this research is below:
(1) To investigate the factors affecting consumers intention to use mobile payment.
(2) To provide recommendations for enhancing the intention to use the mobile payment services.

Research questions

Base on the Research objective above, the research question as follows:

(1) What factors will affect consumers' intention to use offline mobile payments?
(2) How to provide recommendation for enhancing the intention to use the mobile payment services to mobile payment enterprises?

Scope of the study

The scope of this study is Hangzhou, China. The pilot city of cashless society, and China's largest mobile payment company - the location city of Alibaba.

Expected Benefits

Two benefits can be achieved at physical retail places:
(1) Segment the mobile payment market and expansion of research areas. The existing research is mainly focused on the research of mobile payment online, this study is focusing offline payment situation, and combine the theory model to analysis, the conclusion of this research is expected to make contribution to the future academic research related to E-commerce.
(2) The result providing similar enterprises and the providers with useful reference significance

Operational definition

The mentioned mobile payment at "physical retail places" or "offline scenes" mainly refers to consumers' purchase in offline physical places (including department stores, supermarket, convenience stores, restaurants, vending machines, public transportation, and parking lots). the payment method of bill payment is performed through the mobile payment technology (like scanning code payment, code payment, NFC payment, etc.). These are averagely committed through Alipay, WeChat Pay, and Apple Pay, etc.

Literature review

Intention to use of mobile payment research

The research of intention to use mobile payment based on consumer concentrates on the technology acceptance model and diffusion innovation model. Proposed by Fred D. Davis (1989), Technology acceptance model is made up of five factors: perceived usefulness, perceived ease of use, attitude, intention and actual use. This model is widely used in information systems or information technology adoption research. Everett Rogers (1983) raised innovation diffusion model, believing that under the consumer acceptance of innovation level, consumers is composed of innovators, early adopters, early majority, late majority, and laggards. Innovation will be accepted by innovators then following the sequence until laggards, the whole innovation diffusion process will eventually show a "S" curve trajectory, the model is widely used in innovative diffusion behavior interpretation and prediction.

According to the technology acceptance model and the diffusion innovation model, the scholars mainly discussed the affecting factors of consumer use of mobile payment, including cost, convenience (Pousttchi, 2003), ease of use, usefulness (Dahlberg et al., 2003), risk, trust (Mallat, 2007), the speed of the transaction (Dewan and Chen, 2005), individual characteristics (Schierz et al., 2010), network externality (Mallat, 2007), System Stability (Lee and Warkentin, 2004), compatibility (Schierz et al., 2010), social impact (Mallat, 2007) and so on.

In China domestic market, the first type of research base on the technology acceptance model. Wu Xianfeng and Fan Jihong (2010) constructed a mobile payment use behavior model based on perceived risk based on the technology acceptance model and the factors that influence the consumer's acceptance and use of mobile payment. Chen Yang et al. (2014) combined the technology acceptance model with the technology preparation theory and studied the effects of perceived usefulness, perceived ease of use, discomfort, fun, innovation, and insecurity on consumer mobile payment adoption. Lei Jing and Li Xia (2014) introduced compatibility, perceived risk, subjective norms, and personal innovation, and studied consumer mobile payment adoption behavior.

The second is the research based on the integrated technology acceptance model. Chen Huaping and Tang Jun (2006) have added risk perceptions and costs, and empirically examined the impact of risk perception, cost, expected utility, hard work expectation, social influence, and convenience conditions on the intention to use mobile payments. Cao Yuanyuan and Li Qi (2008) added five cultural dimensions to the cultural latitude theory (power distance, individualism / collectivism, masculinization / feminization, uncertainty avoidance, long-term orientation/short-term orientation), explored the acceptance and use of mobile payment users in the context of Chinese culture. Cao Yuanyuan and Li Qi (2009), on the basis of the integrated technology acceptance model, added cost factors to verify the impact of cost, expected utility, hard work expectations, social influence, and convenience conditions on the intention to use mobile payments.

Third, research based on other theories. Yang Shuiqing et al (2011), based on trust transfer theory and potency theory, analyzed how Internet payment trust influences consumers' initial trust in mobile payments under mobile conditions, and empirically tests positive and negative use factors of mobile payment use intentions. influences. Yang Shuiqing et al. (2012) empirically analyzed the factors affecting the initial adoption behavior of mobile payment users based on the overall perspective of social influence, individual characteristics and technical attributes. Yang Yongqing (2012) further studied the consumer acceptance behavior of close-in mobile payments from the theory of perceived value and the theory of network externalities.

Factors affecting consumer intention to use mobile payment

From the previous research, scholars have conducted some research on mobile payment, but there are many researches on mobile payment in the general concept, and few studies on mobile payment in a certain market segment have been conducted. The study of mobile payment adoption behavior in offline scenes is almost blank. However, there are significant differences in consumer adoption behaviors in different payment environments. Therefore, this study will focus on the offline payment scene, to explore the factors that affecting consumers' intention to use mobile payments in offline payment scene, so as to provide corresponding recommendations for the promotion of mobile payment services in offline scenes. The research results of this research have a certain reference significance for the development of mobile payments in offline payment scenarios for companies in the mobile payment industry chain (such as mobile payment service providers, retailer, application providers, system integrators, equipment providers, financial institutions, etc.).

Related theories

Currently, Technology Acceptance Model (TAM) is widely used in the field of behavioral intention and behavior prediction.

Davis (1989) based on the Theory of Rational Action, extracted cognitive and emotional factors, led into the perceived usefulness and perceived ease of use, proposed the technology acceptance model to study the adoption of information systems or information technology. The basic theoretical framework of the technology acceptance model is shown in Figure 3.

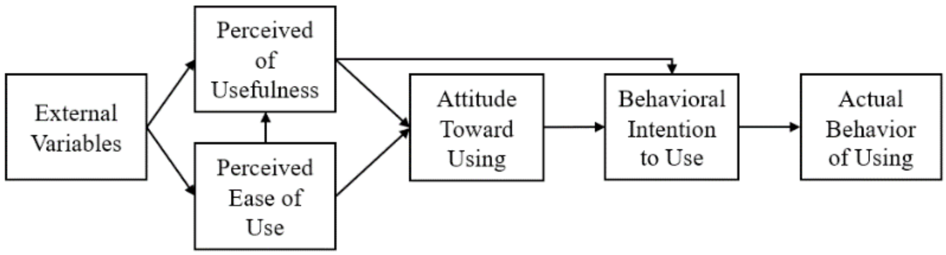

Figure 3 Framework of the technology acceptance model

According to the characteristics of different fields, scholars have extended the technology acceptance model, and added new variables in the traditional technology acceptance model.

In 2000, Venkatesh and Davis cut the influence of attitude on their intension and proposed TAM2. In the face of the same user groups and information systems, TAM2 can explain the user's decision changes better than the classic TAM. Based on the revision of TAM by IDT, the Innovation Diffusion Theory reveals the process of new technologies spreading in society. Innovation diffusion theory focus on new technologies and social behavior, while TAM more focus on technology and user behavior. After that, researchers Hemil (2005), Lei-da Chen (2000), Guo Junfeng (2007) and Zhang Nan, Guo Xunhua, Chen Guoqing (2007) introduced the IDT theory to the TAM of venkatesh.

External variables

(1) Situational Factors: Lavidge (1966) believes that all consumer decision-making behavior is generated in a certain situation, the consumer situation will have a certain impact on consumer decision-making behavior. Engle (1969) study shows that not only individual factors of consumers will influence consumers' decision-making behaviors, situational factors also influence consumers' decision-making behaviors., therefore, in order to better explain the decision-making behavior of consumers, the individual factors and situational factors of consumers should be considered.

(2) Social Influence: In social networks, everyone is affected by strong relationships, weak relationships, and the entire cultural environment in which they live. One's behavior will be influenced by the combined effects of subjective Norms. There are usually four types of peripheral factors, one is interpersonal relationships, including strong ties with parents, classmates, friends, relatives and friends, etc., Venkatesh & Davis defines social

influence as the degree to which individuals are aware of whether others think they should use new information technologies. Jiang Hailong believes that users are influenced by the specific feelings, thoughts and behaviors of a particular person or group, thus deciding whether their intention to use it. Consumers' thoughts and behaviors will not only be influenced by the society and the group they belong to, but also by the marketing and promotion activities of the main bodies in their market environment. Enterprises and businesses in the market environment can increase users' understanding and awareness of mobile payment through various forms of marketing and promotion activities, or attract consumers to try and use through some preferential activities.

(3) Perceived Risk: Pavlou's proposed extension of the technology acceptance model introduces perceived risk and also directly affects perceived usefulness. The basic theoretical framework of the extended technology acceptance model proposed by Pavlou is shown in the figure.

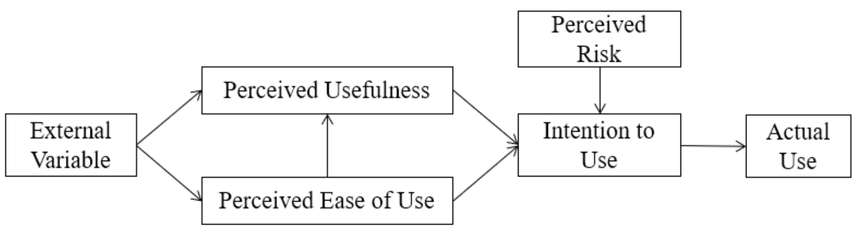

Figure 4 Extension of Technology Acceptance Model

Theoretical model / Conceptual framework

According to related literature research, integrate Technology Acceptance Model and The Unified Theory of Acceptance and Use of Technology Model, combine with the external variables. Therefore, the conceptual framework of the research is showed in the figure 5 below:

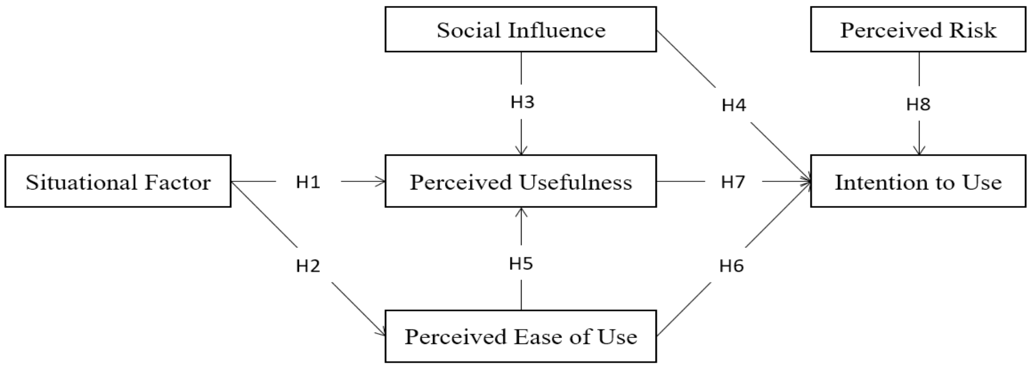

Figure 5 Conceptual framework of research

Hypothesis

According to the above research mode, the hypotheses of this research are respectively stipulated as follows:

H1: Situational Factor has a significant positive impact on the perceived usefulness of consumers using mobile payment in offline situation.

H2: Situational Factor has a significant positive impact on the perceived ease of use of consumers using mobile payment in offline situation.

H3: Social Influence has a significant positive impact on Perceived Usefulness of mobile payment in offline situation.

H4: Social Influence has a significant positive impact on intention to use of mobile payment in offline situation.

H5: Perceived ease of use has a significant positive impact on Perceived usefulness of mobile payment in offline situation.

H6: Perceived ease of use has a significant positive impact on intention to use of mobile payment in offline situation.

H8: Perceived Risk has a significant negative impact on consumers' intention to use mobile payment in offline situation.

Methodology

Research design and sample

This research is using quantitative research method by primary data. The survey method adopted is the questionnaire survey.

The scope of this survey is within the area of Hangzhou, China, the population of this research is uncertain. Therefore, the sample method is using the simple random sampling, the sample size base on the formula:

$$n = \frac{Z_{c.l}^2 \times P(1-P)}{E^2} \qquad (1)$$

Where

n = Sample size,

$Z_{c.l}^2$ = *Square of confidence level, was equal to 1.96 when confidence level is 95%.*

P = Estimated proportion of successes, basically is 0.5.

E^2 = *Square of the maximum allowance for error between the true proportion and the sample proportion. This research takes E = 5%.*

Finally, after calculation, the sample size is 384.

Considering that after the questionnaire is issued, it can not be fully recovered, even if it is fully recovered, it can not guarantee that all the questionnaires are effective. Therefore, it is necessary to adjust the sample size. The sample size before adjustment divided by the effective response rate is equal to the adjusted sample size. The effective question and answer rate needs to be determined based on actual experience or the results of preliminary surveys. The adjusted sample size is the sample size to be issued by our formal questionnaire. According to the adjustment, we finally determined the sample size to be 540 copies.

Data collection

From July 25, 2018 to August 25, 2018.540 questionnaires was distributed.
The distribution process mainly divided into two different ways to distribute questionnaires. One is the online questionnaire survey. By filling out the online questionnaire form, attaching a questionnaire link to social media groups such as WeChat, Weibo, QQ and other social media groups for questionnaire distribution. The other is to distribute questionnaires on the street.

Data analysis

Summary of basic data collection

The survey object of this thesis is Hangzhou citizens. The questionnaires are mainly distributed in the form of field visits and online questionnaires, which largely guarantees the recovery rate and efficiency of the questionnaire. After a three-month questionnaire distribution, all the questionnaires were collected. A total of 540 questionnaires were distributed, and a total of 422 questionnaires were returned, of which 385 were determined to be valid questionnaires.

Reliability analysis

The reliability test is aim to test the reliability, consistency and stability of the experimental results. The higher the reliability, the more stable and reliable the test results are. The data for this study were obtained at similar times and were obtained through questionnaires. Therefore, this study uses the internal consistency coefficient to test the reliability of experimental data. The internal consistency coefficient of questionnaire data is generally measured by using the Cronbach alpha coefficient.

Table 1 Cronbach's alpha test results

Factors	Variables	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	A1	.744	.843	
	A2	.701	.853	
Perceive Ease of Use	A3	.693	.855	.878
	A4	.688	.856	
	A5	.724	.849	
	B1	.695	.868	
	B2	.747	.856	
Perceive Usefulness	B3	.696	.869	.886
	B4	.723	.862	
	B5	.765	.852	
	C1	.789	.838	
	C2	.715	.857	
Perceive Risk	C3	.681	.865	.882
	C4	.733	.852	
	C5	.672	.866	
	D1	.767	.787	
	D2	.626	.825	
Situational Factor	D3	.604	.831	.848
	D4	.615	.829	
	D5	.678	.812	
	E1	.770	.868	
	E2	.704	.876	
	E3	.668	.881	
Social Influence	E4	.686	.879	.894
	E5	.649	.883	
	E6	.674	.880	
	E7	.699	.878	
	F1	.773	.827	
	F2	.669	.851	
Intention to use	F3	.709	.841	.871
	F4	.660	.854	
	F5	.684	.848	
Total				.860

The table above shows the Cronbach's Alpha values obtained by statistical analysis of collected data. Cronbach's Alpha was greater than the critical value of 0.8, indicating high reliability of the measurement model has high reliability, indicating that it has good stability and reliability, and the measurement model has passed the reliability test.

Validity analysis

The Composite Reliability (CR) value and the Average Variance Extracted (AVE) value were used as the evaluation criteria for the convergence validity. The test results of convergence validity and discriminant validity are listed in the Table 2.

Table 2 Confirmatory factor analysis for variables and AVE, CR value

			Factor Loading	AVE	CR
A1	<---	Perceive Ease of Use	0.789		
A2	<---	Perceive Ease of Use	0.762		
A3	<---	Perceive Ease of Use	0755	0.592	0.879
A4	<---	Perceive Ease of Use	0.742		
A5	<---	Perceive Ease of Use	0.797		
B1	<---	Perceive Usefulness	0.755		
B2	<---	Perceive Usefulness	0.808		
B3	<---	Perceive Usefulness	0.742	0.611	0.887
B4	<---	Perceive Usefulness	0.771		
B5	<---	Perceive Usefulness	0.829		
C1	<---	Perceive Risk	0.863		
C2	<---	Perceive Risk	0.781		
C3	<---	Perceive Risk	0.727	0.602	0.883
C4	<---	Perceive Risk	0.785		
C5	<---	Perceive Risk	0.714		
D1	<---	Situational Factor	0.843		
D2	<---	Situational Factor	0.682		
D3	<---	Situational Factor	0.674	0.537	0.852
D4	<---	Situational Factor	0.700		
D5	<---	Situational Factor	0.750		
E1	<---	Social Influence	0.826		
E2	<---	Social Influence	0.749		
E3	<---	Social Influence	0.715		
E4	<---	Social Influence	0.722	0.548	0.894
E5	<---	Social Influence	0.698		
E6	<---	Social Influence	0.721		
E7	<---	Social Influence	0.744		
F1	<---	Intention to use	0.837		
F2	<---	Intention to use	0.727		
F3	<---	Intention to use	0.779	0.582	0.874
F4	<---	Intention to use	0.718		
F5	<---	Intention to use	0.747		

In addition, when the square root value of AVE of each factor is higher than the correlation between the factor and other factors, the discriminant validity is great. As the table 2 is shown below, the square root of AVE is greater than the phase relation value with other factors, which means that the discriminant validity between internal factors of each variable is at high level.

Table 3 Square root of AVE value with Pearson correlation value.

		Situational Factor	**Social Influence**	**Perceive Risk**	**Perceive Ease of Use**	**Perceive Usefulness**	**Intention to use**
Situational Factor	Pearson Correlation	**0.732**					
Social Influence	Pearson Correlation	.420**	**0.740**				
Perceive Risk	Pearson Correlation	-.418**	-.404**	**0.776**			
Perceive Ease of Use	Pearson Correlation	.478**	.358**	-.267**	**0.769**		
Perceive Usefulness	Pearson Correlation	.373**	.362**	-.315**	.338**	**0.782**	
Intention to use	Pearson Correlation	.442**	.531**	-.388**	.411**	.413**	**0.763**

** bold black font is the square root of the Ave value*

Structural equation model fit analysis

Structural Equation Modeling (SEM) is also known as Covariance Structural Model, which is an important tool for multivariate analysis.

According to the theoretical model and hypothesis proposed in the previous chapter, the corresponding structural equation was established, and AMOS software was used to perform the relevant fitting degree test analysis. In this paper, the maximum likelihood method is used to estimate the relevant parameters of the model. In addition, the evaluation criteria for the model are also debated in the industry. Currently, it is generally accepted that the relative index (NFI) is greater than 0.9, and RMSEA is below 0.05, which means that the model fits well, and the range between 0.05 and 0.008 is acceptable. Wen Zhonglin, Hou Jietai and Marsh Herbert proposed in 2004 that the critical value of CFI was 0.9 (the larger the better), the critical value of MC was 0.85 (the larger the better), and the critical value of RMSEA was 0.08(the smaller the better). In addition, the model was better when the value of minimum discrepancy divided by its degrees of freedom was smaller. The criteria for testing the fit index and the results of this study are as follows:

Table 4 Structural equation model fit test

CMIN	df	CMIN/DF	NFI	IFI	GFI	CFI	RMSEA
637.247	449	1.419	0.909	0.971	0.906	0.971	0.033
Suggested value		<3	>0.90	>0.90	>0.90	>0.90	<0.08

Each fitting index of the SEM model reached the recommended value, so the fitting effect of the model is high. Therefore, no model modification is required.

Path analysis of structural equation model

In this study, AMOS software was used for Path Analysis. The Path Diagram of the Structural Model is shown in Figure 6.

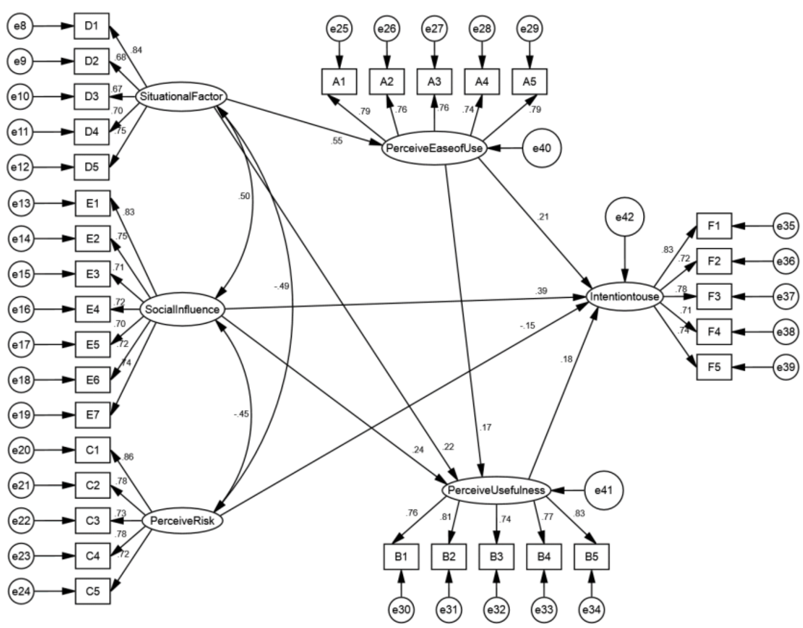

Figure 6 Path diagram of the structural equation model

Table 5 Path Coefficient and Significance Level of the Structural Equation Model.

			Unstandardized Estimate	Standardized Estimate	S.E.	C.R.	P	Label
Perceive Ease of Use	<---	Situational Factor	0.655	0.555	0.069	9.494	***	H2✓
Perceive Usefulness	<---	Situational Factor	0.21	0.217	0.074	2.848	0.004	H1✓
Perceive Usefulness	<---	Social Influence	0.226	0.236	0.06	3.769	***	H3✓
Perceive Usefulness	<---	Perceive Ease of Use	0.144	0.174	0.054	2.644	0.008	H5✓
Intention to use	<---	Perceive Risk	-0.113	-0.154	0.039	-2.884	0.004	H8✓
Intention to use	<---	Social Influence	0.372	0.388	0.056	6.626	***	H4✓
Intention to use	<---	Perceive Ease of Use	0.17	0.206	0.043	3.945	***	H6✓
Intention to use	<---	Perceive Usefulness	0.177	0.177	0.054	3.261	0.001	H7✓
D1	<---	Situational Factor	1	0.837				
D2	<---	Situational Factor	0.796	0.68	0.057	14.01	***	
D3	<---	Situational Factor	0.808	0.672	0.058	13.81	***	
D4	<---	Situational Factor	0.869	0.703	0.06	14.595	***	
D5	<---	Situational Factor	0.861	0.752	0.054	15.877	***	
E2	<---	Social Influence	0.897	0.749	0.055	16.288	***	
E3	<---	Social Influence	0.847	0.715	0.055	15.298	***	
E4	<---	Social Influence	0.821	0.724	0.053	15.554	***	
E5	<---	Social Influence	0.826	0.696	0.056	14.772	***	
E6	<---	Social Influence	0.873	0.72	0.057	15.452	***	
C1	<---	Perceive Risk	1	0.861				
C2	<---	Perceive Risk	0.863	0.78	0.049	17.73	***	
C3	<---	Perceive Risk	0.689	0.729	0.043	16.126	***	
C4	<---	Perceive Risk	0.876	0.784	0.049	17.852	***	
C5	<---	Perceive Risk	0.729	0.717	0.046	15.747	***	
A2	<---	Perceive Ease of Use	0.916	0.761	0.059	15.455	***	
A3	<---	Perceive Ease of Use	0.908	0.755	0.059	15.331	***	
A4	<---	Perceive Ease of Use	0.842	0.743	0.056	15.045	***	
B2	<---	Perceive Usefulness	1.171	0.808	0.074	15.85	***	
B3	<---	Perceive Usefulness	1.089	0.74	0.075	14.428	***	
B4	<---	Perceive Usefulness	1.113	0.771	0.074	15.068	***	
F1	<---	Intention to use	1	0.834				
F2	<---	Intention to use	0.957	0.724	0.062	15.362	***	
F3	<---	Intention to use	1.029	0.775	0.061	16.779	***	
F4	<---	Intention to use	0.953	0.713	0.063	15.053	***	
F5	<---	Intention to use	0.912	0.743	0.057	15.867	***	
A1	<---	Perceive Ease of Use	1	0.79				
A5	<---	Perceive Ease of Use	0.853	0.794	0.053	16.248	***	
B1	<---	Perceive Usefulness	1	0.756				
B5	<---	Perceive Usefulness	1.149	0.825	0.071	16.204	***	
E1	<---	Social Influence	1	0.826				
E7	<---	Social Influence	0.785	0.745	0.049	16.162	***	

In this research using the standardized path coefficient to test whether the hypothesis is significant or not. The path coefficient(β) results of the Structural Equation Model are shown in the table above, and the research hypothesis h1-h8 is verified.

Hypothesis 1: The relationship between Situational Factor and Perceive Usefulness ($\beta = 0.217$, $P = 0.004 < 0.01$) significantly supports the hypothesis H2 at 0.01 level. Accept H1.

Hypothesis 2: The relationship between Situational Factor and perceived Ease of Use ($\beta = 0.555$, $P < 0.001$) is significant at the level of 0.001, was very significant and supported hypothesis H1. Accept H2.

Hypothesis 3: The relationship between Social Influence and Perceive Usefulness ($\beta = 0.236$, $P < 0.001$) significantly support the hypothesis H3.

Hypothesis 4: The relationship between Social Influence and Intention to use is significant at the level of 0.001, which is supported by the value ($\beta = 0.372$, $P < 0.001$). Accept H4.

Hypothesis 5: Perceive Ease of Use have impact on Perceive Usefulness relationship ($\beta = 0.174$, $P = 0.008 < 0.01$) significantly supports the hypothesis H5 at 0.01 level. Accept H5.

Hypothesis 6: Perceived Ease of Use had a significant relationship with Intention to Use at 0.001 level, which is supported by the value ($\beta = 0.17$, $P < 0.001$). Accept H6.

Hypothesis 7: Perceive Usefulness with the Intention to use is significant at the level of 0.01 ($\beta = 0.177$, $P < 0.01$), accept H7.

Hypothesis 8: The correlation between perceived Risk and Intention to use ($\beta = -0.154$, $P = 0.004 < 0.01$) was very significant at the level of 0.01, so hypothesis 8 was verified. The β value is negative means that there is significant negative relation between these two factors. Accept H8.

The Summary of Verified Research Hypotheses are list in the following table:

Table 7 Summary of Verified Research Hypotheses

			Unstandardized Estimate	Standardized Estimate	S.E.	C.R.	P	Label
Perceive usefulness	<---	Situational factor	0.21	0.217	0.074	2.848	0.004	H1✓
Perceive ease of use	<---	Situational factor	0.655	0.555	0.069	9.494	***	H2✓
Perceive usefulness	<---	Social influence	0.226	0.236	0.06	3.769	***	H3✓
Intention to use	<---	Social influence	0.372	0.388	0.056	6.626	***	H4✓
Perceive usefulness	<---	Perceive ease of use	0.144	0.174	0.054	2.644	0.008	H5✓
Intention to use	<---	Perceive ease of use	0.17	0.206	0.043	3.945	***	H6✓
Intention to use	<---	Perceive usefulness	0.177	0.177	0.054	3.261	0.001	H7✓
Intention to use	<---	Perceive risk	-0.113	-0.154	0.039	-2.884	0.004	H8✓

Conclusion and discussion

Through the reliability analysis of the questionnaire, the overall Cronbach alpha value of the Cronbach's alpha coefficient test scale is 0.860, which is higher than the critical value of 0.7, so this survey is reliable.

From the perspective of the respondents on various factors affecting their intention to use offline mobile payments, mainly affected by improve the efficiency of payment, easy to use, financial risk, don't carry enough cash or credit card. Using factor analysis of the overall scale, extracting 27 observation variables into 5 common factors, there are perceive ease of use, perceive usefulness, situational factor, social influence, perceive risk. The respondents' intention to use offline payment is mainly affected by social influence, perceive ease of use, perceive usefulness factors. From a comprehensive analysis, the most significant variable on intention to use is "financial risk".

Through the above series of analysis results, it was finally concluded that the respondents paid great attention to the convenience and convenience of mobile payment platforms to users and whether the payment methods were the most popular and fashionable. Consumers have concerns about the privacy and risks of mobile payment platforms; respondents are not too concerned about the environment in which mobile payments are used; value-added services provided by third-party mobile payment platforms can increase customers' intention to use the platform.

This is a research on the consumer intention to use mobile payments in physical retail places. Based on reading a lot of relevant literature, a model of factors for consumers' use of mobile payments in offline payment scenarios was constructed. Compare to the previous literature review, there are some similarities and differences.

Similarities: Base on Technology Acceptance Model, compared with many mobile payment researches. (Ding Hui., 2014, Factors Influencing Consumers' intention to Use Third Party Mobile Payments; Jie Wang., 2014, A Study on Users’ Acceptance Behavior On Mobile Social Application.)

Differences: (1) The model introduces rational elements of rational behavior theory: subjective norms. Many studies have shown that a single theory cannot predict consumers’ online purchase intentions well. Therefore, this research introduces two major variables: the subjective norms of rational behavior theory and planned behavior theory to improve consumers’ intention to use of mobile payment. (2) Incorporating perceived risk into the TAM model to study consumer online purchase behavior, many scholars have conducted research in this area. (3) Expansion of research fields. With the vigorous development of the mobile communication Internet, the popularity of smart terminals and the offline payment market becoming increasingly saturated, the offline payment market has huge market potential. The existing research (Lijin Liu., 2007, Research on Consumers' Online Purchase Intention Based on Technology Acceptance Model and Perceived Risk) is mainly on mobile payment in online payment scenarios. This study focuses on offline payment scenarios, research the influencing factors of consumers' continued use of mobile payments in offline payment scenarios, the research field of mobile payment has been expanded.

Base on empirical analysis, this research puts forward corresponding countermeasures and suggestions for the development of mobile payment services in offline payment scenarios, mainly including:

(1) To enhance consumers’ intention to use mobile payment is to make good use of community power and strengthen promotion.

(2) The mobile payment providers should increase publicity efforts to improve consumers' perceived usefulness and ease of use. For example, provide more useful value-added services, such as combining public transportation cards for mobile payments, binding takeaways, etc.

(3) Standardize the mobile payment market and reduce perceived risks for consumers. In the offline payment scenario, consumers are mainly worried about five risks when using mobile payment, which are financial risk, psychological risk, privacy risk, functional risk and social risk. Therefore, standardizing the mobile payment market and reducing the perceived risk of consumers is of great significance for promoting the continued use of mobile payments in offline payment scenarios.

(4) Select specific consumption places or environments and focus on promoting mobile payment. The empirical results show that situational factors indirectly affect the intention to use by affecting perceived usefulness and perceived ease of use. Therefore, mobile payment service providers should choose specific consumer places or environments (such as ticketing outlets, shopping malls, supermarkets, etc.) where consumers are vulnerable to contextual factors, and focus on promoting mobile payment services.

Limitation and further research: Although the selection of variables in this study refers to previous literature, for the study of mobile payment users' intention to use, some selection of variables is inappropriate with less considered influential factors. The two mediating variables in the study were not specifically analyzed. In addition, the model design stage of this study did not consider whether adjustment factors such as user education level, age, work experience, and income will affect the intention to use of mobile payment. The reason I set this age range is to consider that older seniors may not have access to a smartphone or it may be more difficult for them to understand with smart payments. Therefore, the minimum age of the last option is set to 48 years, so that the age may be more consistent with the expected normal distribution results. There are no cross-cultural studies were conducted and the differences in consumer intentions to use mobile payment could be different in other cultural backgrounds.

Despite including self-efficacy, trust and other factors, more variables can be bought into the model, aiming to interpret and predict the intention. Furthermore, moderator variables and mediating variable analysis can be appropriately added in the further research along with more research in different culture backgrounds.

References

Ajzen. I.,(1985). From intentions to actions: a theory of planned behavior. *Action Control*, 1985:60-72.

Ajzen. I.,(1991). The theory of planned behavior. *Organizational Behavior & Human Decision Processes*, 50(2),179–211.

Allen. V. L.,(1965). Situational Factors In Conformity 1. *Advances in Experimental Social Psychology*, 2, 133-175.

Bachfischer. A., & Lawrence. E.,(2005). Reshaping the framework for analysing success of mobile payment solutions, *Iadis Press*, 66-70.

Barber. B.,(1983). The Logic and Limits of Trust. *Rutgers University Press*, 2(3), 77-78.

Bauer. R. A., Consumer behavior as risk taking. *Dynamic marketing for a changing world* (pp.389- 398). Chicago: American Marketing Association.

Belk. R. W.,(1975). Situational variables and consumer behavior. *General Information*, 2(3):157-64.

Bitner. M. J.,(1992). Servicescapes: the impact of physical surroundings on customers and employees. *The Journal of Marketing*, 57-71.

Chales. F. Sabel., (1993). Studied trust: building new forms of cooperation in a volatile economy. *Human Relations*, 46(9), 1133-1170.

Coleman, & J. S. (1990). Foundations of social theory．Cambridge，MA：Harvard University, 281-299.

Cox, D. F., (1967). Risk handling and consumer behavior-an intensive study of two cases. *Risking Taking and Information Handling in Consumer Behavior*(pp.34-81). Boston: Harvard University Press.

Dahlberg.T.,& Mallat. N.,& Öörni. A. (2003). Trust enhanced technology acceptance model - consumer acceptance of mobile payment solutions tentative evidence. *Stockholm Mobility Roundtable*, 11(3).56-60.

Davis, F. D., (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, (3).319-339.

Derbaix. C.,(1983). Perceived risk and risk relievers: An empirical investigation. *Journal of Economic Psychology*, 3,19-38.

Deutsch. M., (1958). Trust and Suspicion. *Journal of Conflict Resolution*, 2(4), 265-279.

Dewan. S., Chen. L., (2005). Mobile payment adoption in the USA: a cross-industry, cross-platform solution. *Researchgate*. 34-51.

Engel. J. F., & Kollat. D. T, & Blackwell. R. D.,(1969). Personality measures and market segmentation. *Business Horizons*, 37-66.

Featherman. M., Savlou. P. A.,(2003). Predicting E-services adoption: a perceived risk facts perceptive. I*nternational Journal of Human- Computer Studies*, 59, 451-474.

Fishbein. M.,& Ajzen. I.,(1975). Belief, attitute, intention and behavior: an introduction to theory and research. Addison-Wesley, *Reading*, MA, 234-243.

Fukuyama. F.,(1995). Trust： the social virtues and the creation of prosperity (pp.233-267). New York：FreePress.

Gefen. D., & Karahanna. E, & Straub. D. W., (2003).Trust and TAM in online shopping: an integrated model. *MIS Quarterly*, 27(1):51-90.

Gefen. D., (1997). *Building users' trust in freeware providers and the effects of this trust on users' perceptions of usefulness, ease of use and intended use of freeware*. (Doctoral dissertation), Georgia State University.

Gefen. D.,(2002) Reflections on the dimensions of trust and trustworthiness among online consumers. *Acm Sigmis Database Homepage*, 2002, 33,38-53.

Heijden. H. (2006). Factors affecting the successful introduction of mobile payment systems. *Chinese Nursing Research*, 33(4), 359-365.

Hoffman. D. L.,& Novak. T. P., & Peralta. M. (1999). Building consumer trust online. *Communications of the Acm*, 42(4), 80-85.

Hosmer. L. T., (1995). Trust: the connecting link between organizational theory and philosophical ethics. *Academy of Management Review*, 20(2):379-403.

Jarvenpaa. S. L., & Tractinsky. N.,& Saarinen L., (1999).Consumer trust in an internet store: across-cultural validation. *Journal of Computer-mediated Communication*, 5(2), 79-99.

Karnouskos. S.(2004). Mobile payment: A journey through existing procedures and standardization initiatives. *Communications Surveys & Tutorials IEEE*, 6(4), 44 - 66.

Karnouskos. S.,(2004). Mobile payment: A journey through existing procedures and standardization initiatives. *Communications Surveys & Tutorials IEEE*, 6(4):44 - 66.

Kasmar. J. V.,& Kasmar. J. V.,(1970). The development of a usable lexicon of environmental descriptors. *Environ & Behav*, 133-169.

Kreyer. N.,& Pousttchi. K.,& Turowski. K.(2003). Mobile payment procedures: scope and characteristics. *E Service Journal,* 2(3), 7-22.

Lavidge, R.J.,(1966). The cotton candy concept: intra-individual variability. *Attitude Research at Sea. American Marketing Association*, Chicago, 39-50.

Lee. C. P., & Warkentin. M., & Choi. H. (2004). The role of technological and social factors on the adoption of mobile payment technologies.(pp.17-22) *Amcis*, New York, NY: Americas Conference on Information Systems.

Lewis. J.,& Weigert. A., (1985). Trust as a social reality. Social Forces, 63(4), 967-985.

Luhmann. N,& Poggi. G., & Burns. T, et al. (1979). Trust and power : two works. *U-M-I Out of Print Books on Demand*, 167-200.

Lutz. R. J., & Kakkar. P. T., (1975). The psychological situation as a determinant of consumer behavior.Advances in Consumer Research. *Advances in Consumer Research*, 439-453.

Mallat. N, & Rossi. M., & Tuunainen. V. K., et al. (2009). The impact of use context on mobile services acceptance: The case of mobile ticketing. *Information & Management*, 2009, 46(3), 190–195.

Mallat. N.,(2007). Exploring consumer adoption of mobile payments-A qualitative study. *Journal of Strategic Information Systems*, 16(4), 413–432.

Mayer, & Roger. C.，& Davis， &James. H., (1995). Schoormart, F David. An integration model of organizational trust. *Academy of Management Review*, 20(3), 709-734.

McAllister. D. J., (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of management journal*, 38, 24-59.

Murray. K. B.,(1991).A test of services marketing theory: consumer information acquisition activities. *J Mark,* 55(1), 10- 25.

Pavlou. P A.,(2003). Consumer acceptance of electronic commerce: integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce,* 7(3):101-134.

Peter. J. D., & Ryan. M. J.,(1976). An investigation of perceived risk on brand level. *Journal of marketing research*, 13(2), 184-188.

Pousttchi. K., (2003). Conditions for acceptance and usage of mobile payment procedures. *General Information*, 201-210.

Pousttchi. K., Thurnher. B., (2007). Adoption and impact of mobile-integrated business processes-comparison of existing frameworks and analysis of their generalization potential. *Key Pousttchi*, 45-49.

Rogers, E．M., (1983). *The diffusion of innovations*(pp.76-80)．New York：New York Free Press.

Roselius. Ted., (1971), Consumer rankings of risk reduction methods. *Journal of Marketing*, 35, 56-61.

Rousseau, & D.M., & Sitkin.S．B.,& Burr.R.S.,& Carnerer. C.(1998). Not so different after all：A cross-discipline view of trust．*Academy of Management Review*, 23(3), 393-404.

Rusell W. Belk., (1975). Situational Variable on Customer Behavior. *Journal of Consumer Research* (pp. 157-164). York University.

Schierz. P. G.,& Schilke. O.,& Wirtz. B. W. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. Social *Science Electronic Publishing*, 9(3), 209-216.

Sells. S.,(1963). Dimensions of stimulus situations which account for behavior variance. *Dimensions of Stimulus Situations Which Account for Behavior Variance*, 148-155.

Venkatesh. V., Davis. F. D., (2000). A theoretical extension of the technology acceptance model: four longitudinal field studies. *General Information*, 46(2), 186-204.

Williamson. O. E.,(1987) The Economic Institutions of Capitalism. Firms, Markets, Relational Contracting. *American Political Science Association*, 32(4), 61-75.

Wood. C. M., & Scheer. L. K.,(1996). Incorporating perceived risk into models of consumer deal assessment and purchase intent. *Advances in Consumer Research*, 133-165.

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

THE INNOVATIVE PATIENT SERVICE DESIGN DEVELOPMENT: A CASE STUDY IN THE PREMIUM HEALTHCARE BUSINESS IN CHIANGRAI, THAILAND

Tarittawan Chareanporn[1], Tipavinee Suwanwong Rodbundith[2] and Chanin Yoopetch[3]

[1,2]Business Excellence and Logistics Research Centre (BE-Logist), School of Management, Mae Fah Luang University, 333 Moo1, Thasud, Muang, Chiang Rai 57100, Thailand

[3]Corporate Finance Program, College of Management, Mahidol University
69 Vibhawadi Rangsit Rd., Samsennai, Phayathai, Bangkok 10400, Thailand

[1]tarittawan.cha@mfu.ac.th, [2]tipavinee.suw@mfu.ac.th,[3]chanin.yoo@mahidol.ac.th

Abstract

The purpose of the study is to identify the innovative patient service design in the premium healthcare business. This study adopted a qualitative approach for the research process. The patient service touchpoints are perceived as the service encounter that can create service satisfaction during the customer journey. The semi-structured interview was conducted to collect data prior to the content analysis. The study was conducted with twenty-five informants from healthcare professional groups. They were doctors, nurses, and supported staff who worked in the premium healthcare business in Chiangrai, Thailand. This study only focuses on the patient in Out-Patient-Department (OPD). The results of the study indicated ten critical patients service touchpoints that healthcare service providers can create innovative service during the OPD patient journey. There were 1) Information transaction and doctor appointment or reservation 2) Front counter service and parking and patient pickup point 3) Medical record and registration encounter 4) Vital signs measurement and medical history taking 5) Medical service and diagnostic service encounter 6) A medical procedure or nursing procedures 7) Medical miscellaneous treatment service 8) Claim center service 9) Cashier and 10) Medical dispensing. The discussions, conclusions, and implications were also provided.

Keywords: innovative patient service design, patient service touchpoints, service design, premium healthcare business

Introduction

The healthcare and wellness business is prepared for an aging society, especially in Thailand. According to The Siam Commercial Bank Public Company Limited (2021), Thailand is now in a transition to totally become an aging society. The report is stated that any countries with more than ten percent of citizens who are sixty years old and above from the total number of citizens are considered to be turning into an aging society. Agreeing with Ketsara (2019) mentioned, the percentage of citizens who are sixty years old and above will exceed twenty percent of the overall citizens in Thailand. In addition, World Health Organization (2021) explained under the topic of aging and health as between 2015 and 2050, the proportion of the world's population over sixty years will nearly double from twelve to twenty-two percent. The pace of population aging is much faster than in the past. Then, all countries have to ensure that their health and social systems are satisfying the demand of demographic shift. Moreover, technology and medical development are also allowing longer lives to citizens while the birth rate falls gradually (Ketsara, 2019).

As Krungsri Research (2021) stated, since 2003, the successive Thai government has pursued the goal of establishing Thailand as the regional medical hub. It has been a major driver of the growth of the private healthcare business sector and the development of the medical tourism industry. Moreover, there has been increasing development in large private sector hospitals, specialist hospitals, medical centers, specialist diagnosis and treatment clinics, and care centers or care homes for the unwell and the elderly. The government would continue to support the healthcare industry under a strategic plan to develop Thailand into a global medical and wellness center hub by 2026. Then, these businesses continue to grow at a healthy rate since the service providers are prepared to deliver high-quality care to the patients (Krungsri Research, 2021).

According to Chiangrai provincial development plan 2018 to 2022 (revised version in 2022) (Strategy and information for development division, 2022), the revision plan mentioned, Chiangrai has an opportunity to be medical tourism destination and also offer the new trend of special tourism groups such as health and wellness tourism, creative tourism, and eco-tourism. Moreover, the strength points of Chiangrai province also supported healthcare and wellness business such as the location as a hub of the Greater Mekong Subregion (GMS), variety of transportations, medical tourism resources, etc. In addition, more investments and new establishment of healthcare and wellness business both public and private organization. To secure increase the market shares and long-term growth, exiting healthcare businesses have been investing more to expand their premises and commercial network. Furthermore, some healthcare companies have been building new hospitals or clinics in regional centers, tourist destinations, and border regions to meet demand from neighboring countries, or even buying shares in other profitable hospital groups also (Prachachat.net, 2018).

Nevertheless, service quality and customer satisfaction are considered important factors of patient expectations.

The service quality in healthcare can be defined by customer perception, both public and private organizations try to develop the service quality of the business to gain more competitive advantages and more patients satisfaction (Rungroje, 2019). The service design concept was adopted in this study. It aims to identify innovative service design development during patients' journey for patient satisfaction development in healthcare businesses. Service design is a multidisciplinary concept. The definition of service design will not be explained by a single discipline (Stickdorn, Hormess, Lawrence & Schneider, 2018; Buchanan, 2001). However, it can be defined as the design that primarily considers all stakeholders' experience, not limited to service receivers and service providers. Service design is taking stakeholders relating along the whole service process into account. It is a stakeholders' collaboration into every step to generate an effective service design (Lin, M., Li, F. Y., & Ji, Z., 2020; Lu, P., Liao, H. T., & Lei, J., 2020). Service design has been continuously developing and attempting to serve the best experience to all individuals within the processes and it is apart from consumers (Skooldio, 2021). Service design is a flexible concept in applying the tools to a project's purposes. There are various tools available for service design while it is not necessary to strictly follow tools usage guidelines since it will contrast with service design principles that promote a variety of problem-solving and improving methods (Stickdorn & Schneider, 2014; Lin, et al., 2020). The various tools of service design tools are customer journey maps, stakeholder mapping, personas, service blueprint, service safari, shadowing, contextual interview, mobile ethnography, expectation maps, idea generation, design scenarios, storyboards, agile development, service role play, customer lifecycle maps, and business model canvas, etc. (Stickdorn & Schneider, 2014). Especially, customer journey maps, it is the popular tool for service business design and development. It demonstrates consumer decision-making processes, including prior being the customer and becoming a customer, which the result will be brought to create and develop service design concepts (Stickdorn & Schneider, 2014; Lin, et al., 2020).

Consequently, this study aimed to identify the innovative patient service design development while patient service touchpoints are perceived as the impression encounter that can create service satisfaction. Then, this study was adopted customer journey maps as a service design tool to identify the innovative patient service design development during the customer journey in the premium healthcare business in Chiangrai, Thailand.

Research objectives

This research adopted a qualitative approach for the research process. The objective aims to identify the innovative patient service design in the premium healthcare business, in Chiangrai, Thailand. The study only focuses on the Out-Patient-Department (OPD) patients. A semi-structured interview was conducted to collect research data. The study was conducted with twenty-five informants from healthcare professional groups. They were doctors, nurses, and supported staff who worked in the premium healthcare business.

Research question

To achieve the objective of this research, the following research question was developed to address this research study of the premium healthcare business in Chiangrai, Thailand; "What are the innovative service design development for patients' service journey map?".

Literature review

Healthcare businesses in Thailand and Chiangrai province

According to the office of the permanent secretary ministry of public health (2017), Thailand offers more than 38,512 properties in the healthcare services business. There is thirty-five percent of state-funded public health centers, district public health offices, and community or general hospitals. While the remaining sixty-five percents were private businesses and ventures such as private clinics and hospitals. Then, the weakness of government healthcare providers would lead to an opportunity for private healthcare providers to improve, typically emphasizing the speed and convenience of services and supporting middle-class customers who have sufficient spending power to turn to private hospitals despite charging more than government hospitals for equivalent services (Krungsri Research, 2021). In addition, the expansion of the healthcare business has been driven by the rising patient demand from neighboring countries, agreeing with the number of health and wellness tourists have been rising steadily also (Krungsri Research, 2021; The Siam Commercial Bank Public Company Limited, 2021). Furthermore, the Thai government also promotes Thailand as an international healthcare hub; this main strategy is aligned with rising interest worldwide in medical tourism and helps to attract more foreign patients. The policy of designating Thailand's medical industry and medical hub status is regarded as a new S-curve industry. The Tourism Authority of Thailand (TAT) is promoting the country as the medical and wellness resort of the world. For business investors, the policy has offered a range of incentives such as a tax exemption to attract overseas investors. It included setting up facilities for the research and development of medical innovation and pharmaceutical products and services (Krungsri Research, 2021). All factors have stimulated the investment of healthcare investors in a variety of platforms of business, such as some large and dynamic operators have engaged in mergers and acquisitions. Even existing company, they try to open new hospitals or invest to extend their commercial networks in critical regional centers of Thailand (Krungsri Research, 2021; The Siam Commercial Bank Public Company Limited, 2021).

According to the revision report of Chiangrai provincial development plan from 2018 to 2022 (Strategy and information for development division, 2022) stated, Chiangrai have more opportunities to be medical tourism destination and also offer the new trend of special tourism groups such as health and wellness tourism, creative tourism, and eco-tourism. There were many strength points of the province that supported the healthcare and wellness business. For example, the location as a hub of the Greater Mekong Subregion

(GMS); a variety of transportations and logistic systems; medical tourism resources both of product and services; the related educational institutions etc. Thus, there were more investments and new establishment of healthcare and wellness businesses both public and private organizations in Chiangrai. In addition, to secure increase the market shares and long-term growth, exiting healthcare businesses have been investing more to expand their premises and commercial network. Moreover, some healthcare companies have been building new hospitals or clinics in regional centers, tourist destinations, and border regions to meet demand from neighboring countries, or even buying shares in other profitable hospital groups also (Prachachat.net, 2018).

Service design concept

Service Design is referred to as the design of primarily considers all stakeholders' experiences, which is not limited to service receivers and service providers. Service design is taking stakeholders who are relating along the whole service process into account. In addition, the service design concept is believed that a stakeholder collaboration within every step can generate an effective service design. Collaboration can bring pleasure to all, for example, producers, suppliers, distributors, and local people (Stickdorn, Hormess, Lawrence, and Schneider, 2018). The service design is interdisciplinary which combined different methods and tools. This new method or concept differs from the former, focusing on only one method or tool from a particular discipline. In addition, it is progressively developed; therefore, a common definition or clear explanation has not been available. To provide a single definition will limit the evolution and development of service design concepts and ideas that are gradually growing throughout time (Stickdorn, et al., 2018). Agreeing with Buchanan, R., (2001), to settle service design definition into a specific field is obsolete and unacceptable since it does not conform to multidisciplinary concepts of service design. Then, service design requires multidisciplinary concepts; hence, the definition of service design will not be explained by a single discipline and the development of service design is related to several fields for different purposes (Buchanan, R., 2001: Lin, et al., 2020; Stickdorn, et al., 2018; TCDC, 2015). Hence, '*Service Design*' is a combination of service design for an organization developing directions that concerns all stakeholders such as staff or service providers, customers or service receivers, and other individuals or units relating to service processes (TCDC, 2014). From the above definitions defined, whether it is academic approach or agency approach, it concludes that service design is an integration of interdisciplinary aiming to solve the problems; to develop; to improve; and to create innovation by adding service value to the user as well as concerning to all people throughout the processes.

Service design processes and tools

The service design processes rise from a human-centered design concept aiming to solve users' problems by utilizing research and design competencies. Service design has been continuously developing, attempting to serve the best experience to all individuals within the processes, apart from consumers (Skooldio, 2021). Thinking steps consist of 1) Empathize; it is about understanding users, consumers, and related stakeholders 2) Define; the problem must be clearly defined and identify what should be done to solve the problem 3) Ideate; there is brainstorming to discover the methods to solve an existing problem and 4) Prototype; it tests the prototype of problem-solving methods founded in the previous stage, such as solving plan, simulation situation, model prototype, service standard blueprint. In the last step, it is accurate situation testing and evaluating whether the prototype is effective and can solve an existing problem in a real situation. It will be developed to be more potential (TCDC, 2014; Skooldio, 2021). In addition, Stickdorn and Schneider (2014) mentioned five essential principles of service design, there are 1) *user-centered* service design should transfer experience regarding consumer perception 2) *co-creation*. A co-creation of stakeholders through the entire process enables various viewpoints reflection for solving the problems 3) *sequencing*, well design service will reveal the causes and effects of the performance to stakeholders at every step sequentially 4) *evidenc*e, the service designer must present an intangible service through the tangible physical product to create a touchable feeling even though it is untouchable and 5) *holistic viewpoint*, the service designer has been suggested not to consider only one part of a specific service process but rather to concern the whole environment relating to service design aiming to the highest effectiveness (Stickdorn & Schneider, 2014). While TCDC (2014) and Dusit Thani College (2020) stated that, service design processes involved three steps; there were 1) Exploration; 2) Creation; and 3) Reflection and implementation. Nevertheless, thinking processes employed by TCDC have been developed from Double Diamond Model, which The British Design Council first initiated in 2005 (cited in TCDC, 2015). The model aims to explain attitudes and work processes that combine creative thinking and design process. Double Diamond Model is a mixture of four procedures which are 1) discover; gathering rich and adequate data for design processes, 2) define; analyzing and summarizing important issues, 3) develop; brainstorming all stakeholders to produce feasible concepts for solving, developing, and improving the problems as well as for meeting service design requirements, and 4) deliver; combining various ideas to create the best service design for the market (TCDC, 2015).

There are various tools available for service design development. Service expert designers advise selecting appropriate tools with design context and purposes, and the outcomes will be different in each project. It is not necessary to strictly follow tools usage guidelines since it will contrast with service design principles that promote a variety of problem-solving and improving methods. Service designers are flexible in applying any tools to a project's purposes (Stickdorn & Schneider, 2014). There were many tools for service design such as stakeholder mapping, personas, customer journey maps, service blueprint, service safari, shadowing, contextual interview, mobile ethnography, expectation maps, idea generation, design scenarios, storyboards, agile development, service role play, customer lifecycle maps, and business model canvas (Stickdorn & Schneider, 2014; TCDC, 2015). Especially, customer journey maps are favorable. This offers a better understanding of consumers' behavior, viewpoints, and feeling experienced through touchpoints among service providers, service receivers, and an entire stakeholder. Customer journey maps demonstrate consumer decision-making processes, including prior being the customer and becoming a customer, which the result will be brought to create or to develop service design concepts. Customer journey maps also show reflections in a holistic picture at every service period since the details of pre-service, during service, and post-service are required (TCDC, 2015; Stickdorn & Schneider, 2014).

Research methodology and data collection scope

The study was considered qualitative research that used an in-depth interview technique to collect research. A qualitative approach has been used to obtain essential information and understand the actual context of the patient journey in the premium healthcare business. The semi-structured interview was conducted to collect data before the content analysis. This study was conducted with twenty-five informants from healthcare professional groups (see Table1). There were doctors, nurses, and supported staff who work in the premium healthcare business in Chiangrai, Thailand. Nevertheless, this study only focuses on the patient in Out-Patient-Department (OPD). There were many sampling techniques which are based on non-probability samplings, such as purposive, convenience, quota, and snowball sampling techniques (Neuman, 2006). While purposive and snowball sampling was initially used to identify key informants in the premium healthcare business in Chiangrai, Thailand. The appropriate sample size for an in-depth interview was around fifteen to twenty-five informants or until the data reached the saturation point (Chareanporn, T., Mingmalairaks, P., & Kumsuprom, S., 2020; Creswell & Clark, 2011; Edmonds & Kennedy, 2017; Riley, 1995). Agreeing with Patton (2002) affirmed that there were no specific rules for deciding the sample size if the size could provide significant insights into research issues. In general, the sample size was often decided by resource constraints which depend on the cooperation of research informants or even their effort and contribution to the researcher. Then, the data analysis was done by analyzing each interview from observation notes and grouping the issues found by classifying them into different themes. The data analysis took the form of thematic analysis by using the constant comparative method to identify and refine new categories. In addition, the data validity was assured by comparing statements from the interviewees in the premium healthcare businesses with multiple data sources.

Table 1 Informants list from the premium healthcare professional group in Chiangrai, Thailand

Code	Position/ Title	Age	Type of Organization
PHP1	Doctor/ Management team	57	Premium public hospital
PHP2	Customer service manager	50	Premium public hospital
PHP3	Senior nurse / Assistant director	39	Premium public hospital
PHP4	Nurse	34	Premium public hospital
PHP5	Pharmacist	46	Premium private hospital
PHP6	Doctor	44	Premium private hospital
PHP7	Senior nurse / Claim service manager	42	Premium private hospital
PHP8	Doctor / Assistant director	51	Premium private hospital
PHP9	Senior nurse	42	Premium private hospital
PHP10	Customer service officer	33	Private healthcare business
PHP11	Senior doctor / Management team	57	Private healthcare business
PHP12	Pharmacist / Dispensing supervisor	48	Private healthcare business
PHP13	Laboratory investigation (Lab test) officer	38	Private healthcare business
PHP14	Doctor / Assistant director	57	Premium private hospital
PHP15	Senior nurse / OPD manager	50	Premium private hospital
PHP16	Nurse	36	Premium private hospital
PHP17	Senior nurse/ Head of nursing	54	Premium public hospital
PHP18	Doctor / Assistant director	61	Premium public hospital
PHP19	Customer assistant	30	Premium public hospital
PHP20	Customer service manager	46	Private healthcare business
PHP21	Senior doctor	60	Private healthcare business
PHP22	Doctor	36	Premium public hospital
PHP23	Customer service manager	40	Premium public hospital
PHP24	Pharmacist / Dispensing station manager	39	Premium public hospital
PHP25	Nurse / Customer service supervisor	37	Premium public hospital

Research findings

The results provide a rich summary of the variety of the patient journey in the premium healthcare business in Thailand. The twenty-five informants described ten critical patients' service touchpoints that premium healthcare service providers can create innovative service during the patient journey at Out-Patient-Department (OPD). There were 1) Information transaction and doctor appointment or reservation 2) Front counter service and parking and patient pickup point 3) Medical record and registration encounter 4) Vital signs measurement and medical history taking 5) Medical service and diagnostic service encounter 6) A medical procedure or nursing procedures 7) Medical miscellaneous treatment service 8) Claim center service 9) Cashier and 10) Medical dispensing. The patient's journey map also contained specific influencing service touchpoints that directly relate to patient satisfaction development. The premium healthcare professionals saw them as key patients service touchpoints that were found to innovate patient service design. There were 1) Information transactions and doctor appointments or reservations; it was seen as the first key patients' service touchpoints. They are related to the information provided on healthcare business websites or social media platforms such as Facebook, Instagram, Twitter, YouTube. Most of the patients prefer to search basic information of premium healthcare business before making their decision such as products and services expenses, accurate information, or business staff reliability. In addition, service appointments or reservations are also included in the early step of patient service encounter. Both offline and online channels are offering to the patients to appoint the doctor or reserve a seat for the medical service queue. 2) Front counter service and parking and patient pickup point; it referred to the service encounter area when the patients arrive at healthcare such as the front desk counter, parking lot, and patient pickup point. They are concerned with greeting and hospitality service procedures, car parking and support facilities, and hospital porter assistance. 3) Medical record and registration encounter; Medical record and registration touchpoints had to be established to generate patient profiles and hospital numbers (HN). Furthermore, the initial history taking for new patients who never visited or used the healthcare business service before was necessary for this step. 4) Vital signs measurement and medical history taking; this touchpoint was including of the process of blood pressure, temperature, pulse, and respiration. Moreover, medical history taking step it was included in this period also. Because the healthcare professional has to identify a particular clinic or expert doctor for the patient's illness. Thus, these service touchpoints were important to consider as premium healthcare professionals mentioned. 5) Medical service and diagnostic service encounter; with extensive experiences in the healthcare business, most healthcare professional informants pointed out that the medical service and diagnostic service encounter is one of the important patient service touchpoints. The friendliness of doctors during medical diagnostic service or consultation is really key touchpoint that can impress the patients. In addition, the warm ambient of premium healthcare property helps to increase patient satisfaction and patient loyalty also. 6) A medical procedure or nursing procedures; after medical service and doctor diagnostic process, the medical or nursing procedures are also identified as important service touchpoints in the premium healthcare business. There were the therapeutic, i.e., intended to treat, cure, or restore function or structure such as surgical and physical rehabilitation procedures for patients. 7) Medical miscellaneous treatment service; the miscellaneous treatment service is defined as the medical service such as x-ray, ultrasound, MRI scan (Magnetic Resonance Imaging), or CT scan (Computerized Tomography). In some patient cases, they have to use miscellaneous treatment services during their medical treatment process. In addition, updated technology or innovative machines will be one of the medical miscellaneous treatment service qualities that the patients looking for. 8) Claim center service; most of the informants mentioned that claim center service was a crucial service touchpoint of the patient experience. A lot of patients they concerned about health insurance and welfare benefit right identification accurately. In addition, accurate information on patient insurance and welfare benefit also impact the billing system. Then, the confirmation procedures with the patient was a crucial step of premium healthcare service providers. 9) Cashier; it was the billing system that included an accurate number of expenses and a short period of time of cashier process were necessary for the customer in the premium healthcare business. And 10) Medical dispensing; it can have defined as medicine or drug receiving. The speed time of the service process in this period is essential. Most patients do not want to spend more time after experiencing all medical services processes in the premium healthcare business. Then, the accurate medicine and completed pharmacist suggestions could not be de-prioritized in patient service journeys, as vital informants mentioned in the interview session.

Conclusion and discussion

To fine out the result to answer the research question as "what are the innovative service the design development for patients' service journey map in the premium healthcare business in Chiangrai, Thailand?", the study adopted a service design concept approach to identify the patient's service touchpoints that are perceived as the influencing service encounter of patient satisfaction first. This study focuses only on the patient journey of Out-Patient-Department (OPD). The twenty-five cases had strong service providers in the professional premium healthcare business in Chiangrai, Thailand. There were including of doctors, nurses, and supporting staff.

According to Thailand Creative and Design Center (TCDC) (2015) explained, service designers have been suggested to add flexibility and variety to service design processes depending on business context, characters, duration, and existing resources. Then, this research was adopted the thinking processes employed by TCDC. The research conceptual framework has been developed from the Double Diamond Model, which the British Design Council first initiated in 2005. The Double Diamond model aims to explain attitudes and work processes that combine creative thinking and design process. It was included four phases. There were discovered, defined, developed, and delivered (TCDC, 2016). This study follows the model which is 1) discover phase; the researcher gathering information from premium healthcare professionals who experienced in OPD, and related documents then adequate data about for design processes, 2) define phase; after gaining more information from key informants and documents enough, the researcher analyzing and summarizing essential issues such as patient service touchpoints, patient journey, service design process, and current premium healthcare business situation in Chiangrai, Thailand, 3) develop phase; brainstorming to produce feasible concepts for developing the patient service touchpoints in the premium healthcare business to satisfy the patient experience which customer journey approach as well as for meeting service design development requirements, and 4) deliver phase; combining various ideas to create the suitable procedures guideline of innovative patient service design development for the healthcare professional entrepreneur, investor, or developers in the premium healthcare business by using Chiangrai province as a case study.

From the results, the findings indicated that all premium healthcare businesses require patient service touchpoints development. Most of them try to identify service encounters and create products and services to serve or satisfy patient expectations and satisfaction. The findings could be identified ten critical patients' service touchpoints that healthcare service prprovidersan create innovative service during the OPD patient journey. There were 1) Information transaction and doctor appointment or reservation 2) Front counter service and parking and patient pickup point 3) Medical record and registration encounter 4) Vital signs measurement and medical history taking 5) Medical service and diagnostic service encounter 6) A medical procedure or nursing procedures 7) Medical miscellaneous treatment service 8) Claim center service 9) Cashier and 10) Medical dispensing, which were repeated by more than one premium healthcare professionals from the case analysis. The healthcare professional service providers saw them as key patient service touchpoints that were found to innovate patient service design. In addition, each of these patient journey touchpoints also contained specific influencing service procedures that directly related to patient experiences and satisfaction development. As Stettler et al., (2018) highlighted the importance of services experiences in the service process is one of the most important components in service design.

Based on all service touchpoints from the patient journey map and the direction of the key service design innovation that derived from patient demand and expectation which fulfill the service encounter, it is possible to form the innovative patient service design of opportunity points that the patient needs to carry out of premium healthcare business. The innovative patient service design from the service design approach is mainly based on the result of the service design process. It could be categorized the innovative patient service design development into patient service journey map as three periods. There were 1) Pre-medical service period, 2) In-medical service period, and 3) Post-medical service period. By analyzing the ten service encounters, patient service touchpoint innovation procedures were clearly investigated and developed. This is an innovative design of service procedures based on patient demand and expectation from a premium healthcare professional perspective. The details were as follows;

1) Innovative service design procedure in pre-medical service period; in terms of information transection and doctor appointment or reservation, innovative service design of this touchpoint could be developed user-friendly website and use popular social media to the potential facilitated customer. As Yoopetch (2018) stead that, social media had a crucial influence on the service design ithe n various services industry, especially in the service business. In addition, the premium healthcare business should educate front counter or customer service staff to deliver crucial and essential information of products and services or pre-consultant the customers. Moreover, both offline and online platforms should be available channels that customers can make doctor appointments or reserve a seat for the medical service queue. Most

of the patients prefer to know the basic information of the premium healthcare business before making their own decision. Thus, accurate products and services information and services expenses and estimates were essential things to prepare. For front counter service and parking and patient pickup point, innovative service design procedures should deliver to all patients by premium healthcare staff such as hospital porter and assistant, hostess, or valet service staff. When the patients arrive at healthcare property such as the parking lot, patient pickup point, or front desk counter, all staff can create the first impression. The premium healthcare professionals can set a service guideline or services standard such as greeting conversation, warm welcome speech, assistance with attention procedures, etc. During medical records and registration encounters, it is an important touchpoint for the patient journey also. The effective communication and professional hospitality service procedures are the innovative service design of this touchpoint because the staff has to generate a patient profile, hospital number (HN), initial history taking for a new patient who never visits or uses the service of premium healthcare business before, and health insurance and welfare benefit right checking for all patients. In the period of vital signs measurement and medical history taking, the innovative service design of this touchpoint is providing well-educated service staff. The essential competencies were observant, medical services skillful, and great communication because staff had included in step of blood pressure, temperature, pulse, and respiration. Moreover, it also included medical history taking that healthcare professional has to identify a special clinic or expert doctor for the patient illness.

2) Innovative service design procedure in in-medical service period; from the study result, there were the medical service and diagnostic service encounter, a medical procedure or nursing procedures, and medical miscellaneous treatment service were developed innovative service design touchpoints. With extensive experience in the healthcare business, most healthcare professional informants pointed out that the medical service and diagnostic service encounter is one of the important patient service touchpoint. The providing of great and warm ambient of doctor consultation and diagnostic service encounter is an innovative service design for premium healthcare business. The respectability and friendliness of doctors during medical diagnostic service and consultation are key patient expectations that lead to patient satisfaction and loyalty. After the medical service and doctor diagnostic process, medical or nursing procedures from the doctor or nurse could be identified as innovative service design opportunity touchpoint. The technical competences of healthcare professionals have been required for this touchpoint. In addition, the service mind procedures and service standards are patient anticipations. Then, all medical procedure service from doctor or nurse should be well established. Those activities were the therapeutic, i.e., intended to treat, cure, or restore function or structure such as surgical and physical rehabilitation procedures, etc. Furthermore, in terms of medical miscellaneous treatment service, it is one of the touchpoint service that can innovate service design for the patient in

the premium healthcare business also. The miscellaneous treatment service was the medical service such as x-ray, ultrasound, MRI scan (Magnetic Resonance Imaging), or CT scan (Computerized Tomography). In some patient cases, they have to use miscellaneous treatment services during their medical treatment process. The knowledgeable, competent, skillful, and concentrated with patients are identified as key innovative service design development for healthcare professionals. Furthermore, updated technology or innovative machines will be one of the medical miscellaneous treatment service quality that the patients looking for.

3) Innovative service design development in post-medical service period; from the finding, it was found that claim center service, cashier, and medical dispensing were the service touchpoints that got potential to develop in service design procedures. All crucial service touchpoints of patient journey required competence and well communication staff, and hospitality and service mind manner. The innovate service design development is exhaustively and completely performances because a lot of patients they concerned about health insurance and welfare benefit right identification accurately. Moreover, accurate information of patient insurance and welfare benefit also impact to billing system. Then, the confirmation procedures with patient was a crucial step of premium healthcare service providers. For cashier touchpoint; it was referred to the billing system that included of accurate number of expenses and short period of time of cashier process were necessary for patient in premium healthcare business. It was innovative service design opportunity that premium healthcare business can initiate. While medical dispensing touchpoint required both accurate medicine and completed pharmacist suggestions and short time to waiting also. The speed of service time in the service process is also the focal point of the post-medical service period. In addition, Yoopetch (2010) suggested that to enhance innovation in services environment, the organization should increase the awareness of knowledge management, especially knowledge acquisition process to continuously improve the service development. Moreover, Lu, et al. (2020) mentioned, service design thinking has been increasing the attention and attraction for customer in healthcare business and creating a great potential in creating better. It is agreeing with Patricio, L., Sangiorgi, D., Mahr, D., Čaić, M., Kalantari, S., & Sundar, S. (2020) mentioned, service design can contribute to the evolution of healthcare service system and also focus on patient centered for service satisfaction purpose. Furthermore, Ponsignon, F., Smart, A., and Phillips, L. (2018) suggested the theoretical insight into service delivery system (SDS) design, the customer journey can use as a frame to explore dimensions of experience quality that inform design requirements. It can help healthcare professional service provider deliver experience quality to patients, especially in premium healthcare business.

Recommendations and future research

As patient service touchpoints are perceived as the service encounters that can create service satisfaction during the customer journey, based on the service design approach, ten critical patient service touchpoints from the OPD patient journey map and the direction of the key service design innovation procedures that are derived from patient demand and expectations that fulfill the patient experiences were identified. It is possible to form an innovative patient service design with the opportunity points that the patient needs to carry out of the healthcare business. By analyzing these service encounters, patient service touchpoint innovation procedures were clearly investigated and developed to gain more patient service satisfaction and competitive advantages in the premium healthcare business. Nevertheless, further research should investigate more premium healthcare businesses property and apply a quantitative approach to increase the generalizability to reaffirm the results of the study. Nevertheless, this study was exploratory research that aimed to identify the innovative patient service design development while patient service touchpoints are perceived as the impression encounter that can create service satisfaction. Then, this study adopted customer journey maps as a service design tool to identify the innovative patient service design development during the patient journey in the premium healthcare business in Chiangrai, Thailand. Furthermore, this study focuses only on the patient journey of Out-Patient-Department (OPD). They are limitations of the study. It was expected that this paper had the value that could provide an analysis of the crucial patient service touchpoints that adopted a service design approach to develop patient service encounters on patient journeys in the premium healthcare businesses in the future.

References

Buchanan, R. (2001). Design research and the new learning. *Design issues*, *17*(4), 3-23.

Chareanporn, Tarittawan. Mingmalairaks, Phoommhiphat. & Kumsuprom, Siridech. (2020), The Influencing Context of Organizational Implementation Strategy Toward Accommodation Business in Thailand, *Suthiparithat Journal*, 34(109), 216-229.

Dusit Thani College. (2020). What is service design? and for whom: hotel management. Retrieved 19 May 2021, from https://blog.dtc.ac.th/service-design

Ketsara Bhoyen. (2019). Aging Society: Opportunities for the Future Sustainable Business. Retrieved 28 January 2022, from http://msjournals.aru.ac.th/Document/fulldoc/21_1/91-1-608-1-6-20190701.pdf

Krungsri Research. (2021). Industry Outlook 2020-2022: Private Hospital Retrieved 26 July 2021, from https://www.krungsri.com/en/research/industry/industry-outlook/Services/Private-Hospitals/IO/io-Private-Hospitals

Lin, M., Li, F. Y., & Ji, Z. (2020). How to Innovate the Service Design of Leisure Farms: The Innovation of Sustainable Business Models. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(3), 45.

Livework. (2014). Service design is not about 'pampering': a brief overview on prejudice. Retrieved 19 May 2021, from https://www.liveworkstudio.com/ blog/service-design-is-not-about-pampering-a-brief-overview-on-prejudice/

Lu, P., Liao, H. T., & Lei, J. (2020). Applying Service Design in Public Services: A Scientometric Review for Innovations in Public Health and Administration. In *2020 Management Science Informatization and Economic Innovation Development Conference (MSIEID)* (pp. 381-384). IEEE.

Moritz, S. (2005). Service design practical access to an evolving field. Retrieved 19 May 2021, from https://www.servicedesignmaster.com/wordpress/wp-content/ uploads/2019/06/PracticalAccesstoServiceDesignsinglepages.pdf

Neuman, W.L. (2006). *Social Research Methods: Qualitative and Quantitative Approaches*. (6th ed.), Boston, USA: Pearson Education.

Office of the permanent secretary ministry of public health. (2017). Announcement of information on the number of health agencies Retrieved 1 August 2021, from http://thcc.or.th/download/letter%20hcode%204%20April%2017.pdf

Patton, M.Q. (2002). *Qualitative Research & Evaluation Methods*. (3rd ed.). London: Sage Publications.

Patricio, L., Sangiorgi, D., Mahr, D., Čaić, M., Kalantari, S., & Sundar, S. (2020). Leveraging service design for healthcare transformation: toward people-centered, integrated, and technology-enabled healthcare systems. *Journal of Service Management*, 31(5), 889-903

Ponsignon, F., Smart, A., & Phillips, L. (2018). A customer journey perspective on service delivery system design: insights from healthcare. *International Journal of Quality & Reliability Management*, 35(10), 2328-2342.

Prachachat.net (2018). 5 public and private hospital "Chiang Rai" Rung Parade to invest in new building - expanding the building. Retrieved 31 January 2021, from https://www.prachachat.net/local-economy/news-229763

Riley, R.W. (1995). *Prestige-worthy tourism behavior. Annals of Tourism Research*, 22(3), 630- 649.

Rungroje Songsraboon. (2019). Model of Health Care Services Affecting the Satisfaction of PatientIn Internal Medicine Department Selected Private Hospitals. *Journal of Political Science Suan Sunandha Rajabhat University*, 2(2), 82-95.

Skooldio. (2021). What is service design. Retrieved 19 May 2021, from https://blog.skooldio.com/service-design/

Stettler, J., Rosenberg-Taufer, B., Huck, L., Hoppler, A. A., Schwarz, J., Yoopetch, C., & Huilla, J. (2018). A Conceptual Framework of Commercial Hospitality:

Perception of Tourists in Thailand and Switzerland. In *Contemporary Challenges of Climate Change, Sustainable Tourism Consumption, and Destination Competitiveness*. Emerald Publishing Limited. 123-138.

Stickdorn, M. S., & Schneider, J. (2014). *This is Service Design Thinking: Basics, Tools, Cases*. page 28-35. BIS publisher. Netherland

Stickdorn, M., Hormess, M. E., Lawrence, A., & Schneider, J. (2018). *This is service design doing: applying service design thinking in the real world*. "O'Reilly Media, Inc.".

Strategy and information for development division (2022). Chiangrai provincial development plan 2018 to 2022 (Revised version in 2022). Chiang Rai Provincial Office. Retrieved 31 January 2021, from http://123.242.164.131/cpwp/?cat=15

TCDC. (2014). Service design work book. Retrieved 19 May 2021, from https://web.tcdc.or.th/th/Projects/Detail/Service-Design-Thailand

TCDC. (2015). Service design process and methods Retrieved 19 May 2021, from http://resource.tcdc.or.th/ebook/Service-Design-Book-Final.pdf

The Siam Commercial Bank Public Company Limited. (2021). How Will Thai Stock Market be When Thailand Has Turned into Aging Society Retrieved 26 July 2021, from https://www.scb.co.th/en/personal-banking/stories/retirement-plan/ageing- society.html

UK design council, 2015. What is service design? Retrieved 19 May 2021, from https://www.designcouncil.org.uk/news-opinion/video-what-service-design

World Health Organization. (2021). Ageing and health. Retrieved 28 January 2022, from https://www.who.int/news-room/fact-sheets/detail/ageing-and-health

Yin, R.K. (2013). Case Study Research: Design and Methods. (5th ed). Thousand Oaks, California: SAGE Publication

Yoopetch, C. (2010), The model of knowledge acquisition: the study of SMEs in the Thai Hospitality Industry, *World Academy of Science, Engineering and Technology, 42*, 351–354.

Yoopetch, C (2018). The impact of social media on hospitality brand and image, *UTCC International Journal of Business and Economics 10 (1)*, 139-150

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

IMPACT OF DESTINATION IMAGE, COUNTRY PERSONALITY IN THAI TOURIST'S REVISIT INTENTION TO CHINA

Mingming Zhang[1], Panita Surachaikulwattana[2] and Thitikan Satchabut[3]
[1,2]University of the Thai Chamber of Commerce
126/1 Vibhavadi Rangsit Rd., Dindang, Bangkok 10400, Thailand
[3]National Kaohsiung University of Hospitality and Tourism
812301 No.1, Songhe Rd., Xiaogang Dist., Kaohsiung City, Taiwan (R.O.C.)
[1]axmandy0408@hotmail.com, [2]panita_sur@utcc.ac.th, [3]titikant.sat@gmail.com

Abstract

This study adopted the concept of brand personality in the tourist industry. Constructing the brand personality in the field of tourism measurement scale, and applying it to the service product for empirical research, which complements and perfects the attitude theory. This paper will integrate relevant theories and methods in different fields, and on the basis of the influence of destination image, country personality on revisit intention, study the influence of destination image, country personality on travel intention, promote multi-disciplinary integration, and play an important role in guiding the research trend of tourist future behavior.

The objective of this study was to investigate the effects of destination Image, country personality and tourists' attitude on the Thai tourist revisit intention to China. The population of this research was tourists who have been China once. Data was analyzed by regression analysis. The results reveal that destination image has a significant effect on tourists' attitude, country personality and tourists' attitude have a significant effect on the Thai tourist revisit intention to China. The findings can provide information for the tourism sector about how to develop destination competition, adopt destination image, positive country personality to attracting more Thai tourists to revisit China.

Keywords: impact of destination image, country personality, intention to revisit

Introduction

Problem statement

According to Center of China and Globalization report, China's international tourist deficit is 31,635,500. The international tourist deficit is defined as "the number of foreign tourists who leave the country to other countries (regions) larger than the number of foreign tourists entering the country". According to the 2016 Statistical Bulletin of National Economic and Social Development published in February 2017, the foreign exchange income of China's inbound tourists in 2016 was US$120 billion, an increase of 5.6%. According to UNWTO report data, China's travel service expenditure in 2016 was US$261.1 billion, which is about 2.2 times China's tourism foreign exchange income.

This paper is a follow-up to Hosany's research on brand image and brand personality in the context of the tourism industry. Exploring the relationship between destination image and country personality influences consumers' intent to return to the same destination. Explore how China can capture its destination image to reduce the tourist trade deficit.

Research question

1. Is there an effect of destination image on tourist's attitude toward destination?
2. Is there an effect of country personality on tourist's attitude toward destination?
3. Is there an effect of destination image on revisit intention?
4. Is there an effect of tourist attitude toward destination on revisit intention?

Expect outcome

The results of this research can help China to shape their destination image, and improve China's competitiveness in the international tourism market that increasingly stimulating, attracting more Thai tourists to China, improving China's situation on the international tourist deficit, and reducing the gap between tourism money out and in.

The data collected in this study can be used by government departments or travel companies, To specific market segmentation depend on Thai tourist characteristics, or to make a video to promote China's destination image and improve China's negative country personality. Or perform additional marketing activities to gain more market share in Thailand.

Literature review

Destination image

Hunt introduced the concept of image into tourism destinations, and emphasized the importance of this concept. Crompton (1979) shows that the destination image is all the ideas that tourists generate in the place, including beliefs and opinions. Embacher and Buttle (1989) show that the destination image is the overall impression of the tourist's after completed their travels. Echtner and Ritchie (1991) show the biggest impact on their destination choice is the image of this place. Tapachai and Waryszak (2000) believe destination image is related to the tourist's consumer value and expected benefits. Guan Xinhua et al. (2015) believe that the individual’s own overall impression of the place is the destination image. Endah et al. (2017) propose that the destination image is the individual's own perception of the destination and can be used as a push factor in the decision-making process.

Based on the above literature review, this paper adopts the generally accepted definition of the destination image, that is, all the perception formed by tourists on the destination, including beliefs, opinions and impressions. However, no matter what kind of composition, scholars generally acknowledge that the destination image is composed of at least cognitive and affective parts. Therefore, this research believes that the destination image contains cognitive images and affective images.

Tourist’s attitude toward destination

Attitude is the core concept in psychology and social psychology, and it is also the subject of extensive research in other social sciences. Allport (1935) concluded attitude is a learned expectation that most researchers are agree with that, after reviewing the general attitude theory and research. He pointed out that the bipolarity of attitudes (likes and dislikes) is often considered the most special point of this concept (Allport, 1935). However, not all researchers regard attitude as a unidimensional concept. Fishbein (1967) believes that with the development of attitude-related research, attitudes are increasingly highlighted as a complex, multi-dimensional concept that covers Psychological characteristics of knowledge, emotions and intentions (Hshbein, 1967). In order to present the multidimensional and complex nature of attitudes more clearly, researchers often conceptualize attitudes into three dimensions of cognition, affection, and behavior (McDougall, Munro, 1987). The cognitive part of attitude includes the individual's beliefs and knowledge or perception of specific objects. The affective part is the individual's like or dislike of the specific object. The behavior part reflects the individual's actions or expressions related to the specific target object. There are two main types of attitude research in the tourism field. The attitude research on the residents of the tourist destinations and tourist attitude. The research on the attitudes of the residents has been studied more than 30 years. The attitude research in the early tourism field mainly focuses on The impact of the residents of tourist destination attitudes toward to the tourism industry. (Andereck, Vogt, 2000)

Revisit intention

There are three main reasons why the industry pays attention to the revisit intention: First, compared with first-time visitors, repeat visitors stayed at the destination for a longer period of time and consumed more (Wang, 2004; Alegre, Juaneda, 2006). From a profit perspective, it is more cost-effective for destinations attract repeat visitors than to develop first-time visitors. Second, compared with first-time visitors, repeaters are more likely to spread positive news about destinations (Petrick, 2004), which is equivalent of free advertising to destinations, which helps to save marketing costs. Third, the cost of attracting repeat visitors is lower than that of developing first-time visitors (Shoemaker, Lewis, 1999). The academic community pays attention to the revisit intention, not only because it has important practical significance, but also because it has important theoretical significance. According to Qu et al. (2011), the revisit intention conveys the signal of tourist loyalty and is an effective predictor of tourist loyalty. The overall image is an important factor leading to tourists' revisit intentions.

Conceptual framework

Framework development

Souiden, N.et al.(2017) developed conceptual model (see Fig. 1) Assume that the destination image affects the destination personality and thus the destination attitude. The latter has an impact on behavioral intentions. However, the literature review shows that there are different concepts of causality between destination image and destination personality. The second alternative model shows a direct and independent path from image and destination personality to attitude, stipulating that the destination personality and image are two separate structures. The third alternative model shows that the destination personality has an indirect effect on attitude through the destination image. The last alternative model considers that the destination personality has a direct and indirect impact on attitude through the destination image.

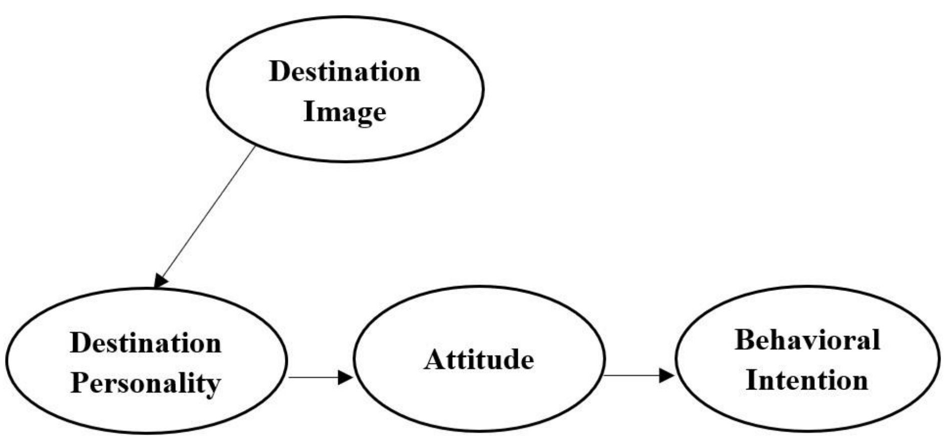

Figure 1 Conceptual framework for examines the impacts of destination personality and image on individuals' attitudes and visiting intentions.

Aktan, M.et al developed the conceptual framework according to previous studies. They believed that country personality can directly influence consumers' product attitudes. In this regard, like a brand, the country's personality traits also affect product awareness. In addition, one aspect of self-consistency (consciousness) mediates the relationship between country personality and attitude.

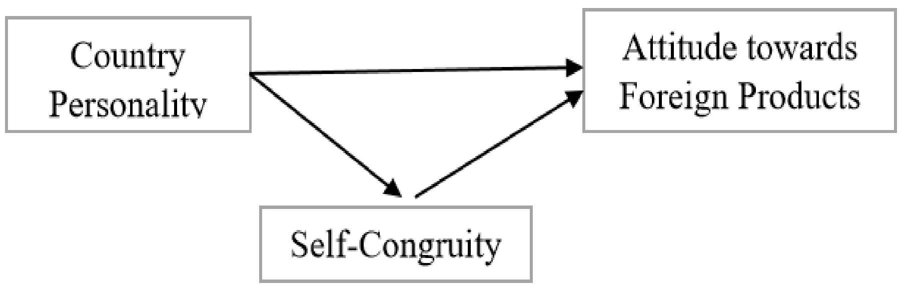

Figure 2 Conceptual framework for examines the direct effect of country personality (CP) on consumer product attitude and indirect effect through consumer self-congruity between CP and his/her own self-concept on product attitude in an emerging country- Turkey.

Chew, E. Y. T., & Jahari, S. A.(2014) found new insights by this research (1) the impact of perceived risk on the destination image, and (2) the mediating role of perceived risk and the desire to revisit the visitor's intention to revisit the destination.

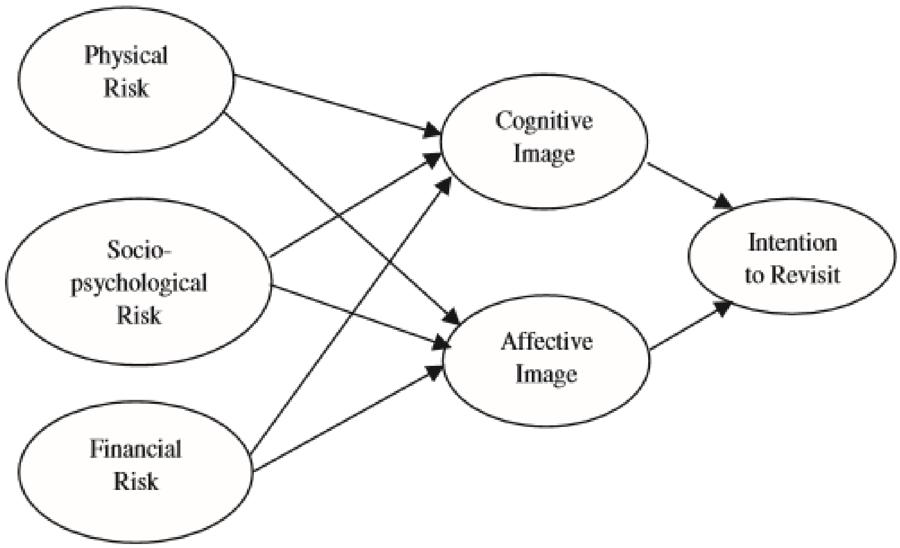

Figure 3 Conceptual framework for Destination image as a mediator between perceived risks and revisit intention

Kim, S. B., & Kwon, K. J. (2018) explored the moderating effects of familiarity through a research model that links tourists' two dimensions of destination image, attitude, and intention to visit. Evaluated that cognitive image of Korea significantly affected their affective image, in turn affecting attitudes toward country, products, and cuisine.

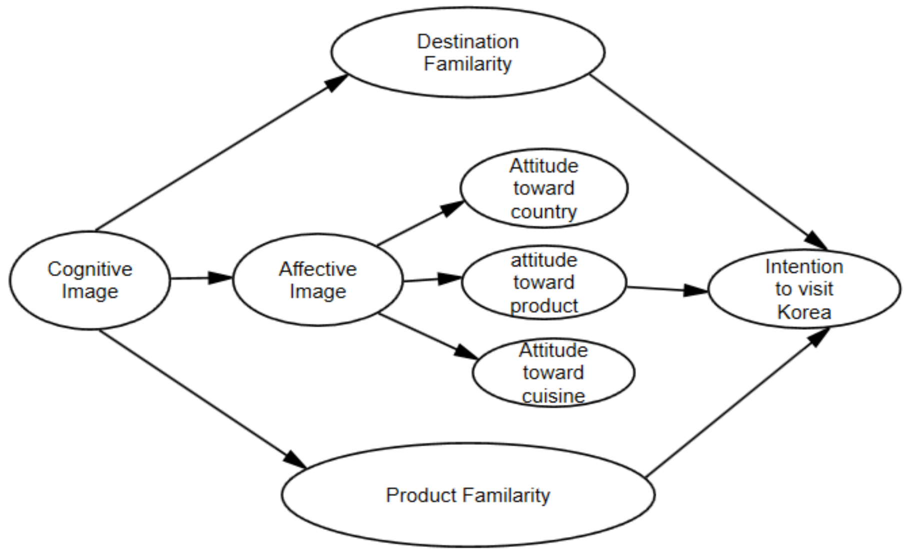

Figure 4 Conceptual framework for country image and attitudes on Tanzanian tourists' intention to visit Korea

The research conceptual framework

Based on the literature review and the hypotheses detailed below, the conceptual model proposed and tested in the current study is presented in

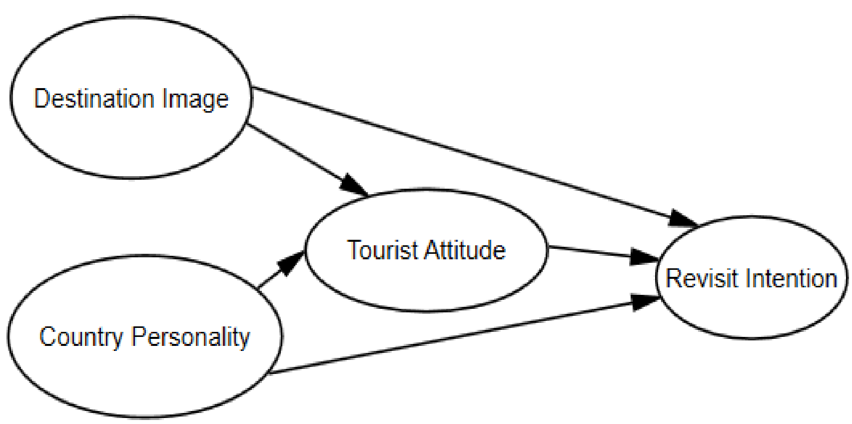

Figure 5 The research conceptual framework

Methodology

Research design

Revisit intention use attitude theory, this study selects residents who have been visiting China as the survey object, Questionnaire is used as the main data source to collect the views of Thai tourists on China's tourism revisit intentions.

Ward, & Pratt (1981), Baloglu & McCleary (1999a), San Martin & Rodriguez del Bosque (2008). These items were adopted based on the study of Baloglu and Brinberg (1997), Baloglu and McCleary (1999b), and Walmsley and Jenkins (1993). In the study of emotional destination image, the impression of China is divided into eight categories: disgust, vitality, pleasure, unhappiness, depression, motivation, pain and relaxation. All kinds of foreigners are deeply investigated and analyzed. This part consisted of 23 items to measure country personality. The respondents were asked to think of the country as if it were a person and to ascribe human personality traits to it (Davies, et al., 2001). The stimuli country (China) had to be evaluated using 23 personality traits with the help of a 5-point scale (d' Astous & Boujbel, 2007).

Measures of respondent attitudes toward China were adopted primarily by Passow et al. (2005) This paper studies and analyzes the attitude of tourists to travel to China, and analyzes the attitude of researchers. I love China, I have a good opinion of China, and China is a good place for tourism. From the survey data, it is found that foreign tourists are full of interest and interest in China's tourism. While those measuring respondents' revisit intentions and recommendations were derived and adapted from Baker and Churchill's (1977) and Putrevu and Lord's (1994) studies.

Population and sample

The population use in this paper is Thai tourist that travels in China. The following table shows the information about total and an average number of Thai tourist arrivals in China from The author investigated the number of Thai tourists traveling to China from 2013 to 2017. The data showed that the number of Thai tourists traveling to China increased year by year, from 660000 in 2013 to 770000 in 2017, with an average of more than 700000 tourists traveling to China every year.

The total number of Thai tourists in China is 2,894,700, and the average number of tourists for each year is 578,940 (rounded).

The sample size of this study is calculated by using Yamane (1973) formula with 95% confidential level, the formula is presented as below:

$$n = \frac{N}{1 + Ne^2}$$

n is size of sample

N is population of sample

e is probability of error

The result of the sample size of this study is:

$$n = \frac{2894700}{1 + 2894700 \times 0.05^2}$$

n=399.944734206

n≈400

Data collection and data analysis

This study conducted a questionnaire survey of Thai tourist who have been to China. 450 questionnaires were distributed by Email, Facebook and We chat, let my Thai friends help me pass the link that adopted from google form to their relatives and friends to answer the questionnaires. And also post on my Facebook page to let more Thai people who have been to China to help answer this research. Before the online questionnaire survey begins, the survey is set to “Do not allow the same IP to answer twice” to avoid repeated answers. And will translate to Thai language to make sure Thai tourist can understand.

Multiple regression analysis was applied to test the effects of destination image, country personality, and tourist attitude factors on revisiting intention.

Result analysis

Means and standard deviation of questionnaire statements

The following content were analyzed by Descriptive Statistics which are mean ($\overline{X}$), and standard deviation (S.D.). The result is shown in the table and the following explanation.

Destination image

Table 1 Descriptive statistic results of destination image

Cognitive image	Mean	SD
Natural Attraction	4.22	.450
China has several natural parks	4.15	.683
China offers much in terms of natural scenic beauty	4.29	.595
China has many historic sites and museums	4.26	.651
China has beautiful scenery	4.17	.740
Infrastructure	4.08	.498
China has a good infrastructure (roads, communication services, etc.).	4.12	.760
China has good quality accommodations	4.07	.763
China can find information for travel easily and conveniently	4.05	.788
China has a good standard of hygiene and cleanliness	4.09	.777
Atmosphere	4.04	.570
China has a good nightlife	4.00	.786
China is an exotic destination	4.02	.780
China has an adventure atmosphere	4.08	.788
Social Environment	4.05	.583
Local community is friendly and helpful in China	4.09	.755
Chinese people can understand English	4.01	.896
China is a safe place to travel	4.07	.811
China is a clean and organized place	4.02	.846
Value for Money	4.07	.571
China's accommodations are reasonably priced	4.06	.737
China is an inexpensive city	4.09	.788
China offers good value for my travel money	4.08	.809
Affective image	1.974	.66844
Sleepy/Arousing	4.20	.809
Unpleasant /Pleasant	3.89	.830
Gloomy /Exciting	4.06	.815
Distressing /Relaxing	3.96	.837

The Table 4.1 showed that participants are most agree with natural attraction of China (mean= 4.22), followed by the infrastructure of China (mean= 4.08) and the lessee agrees is atmosphere of China (mean= 4.04). When considered a natural attraction each item, it is found that participants are most agree with an item "China offers much in terms of natural scenic beauty"(mean= 4.29), followed by "China has many historic sites and museums" (mean= 4.26), and the last is "China has several natural parks" (mean= 4.15).When considered infrastructure by each item, it is found that participant are most agree with an item "China has good infrastructure (roads, communications, services, etc.)" (mean= 4.12), followed by "China has a good standard of hygiene and cleanliness" (mean= 4.09). And the last one is "China can find information for travel, easily and conveniently" (mean= 4.05). When considered atmosphere by each item, it is found that participants are most agree with an item "China has an adventure atmosphere" (mean=4.08). Followed by “China is an exotic destination” (mean=4.02).

Attitude to destination

In the survey of China's tourism attitude Most respondents agree with “Visiting China is a good decision” (mean=4.23), followed by “I have a favorable opinion of China” (mean=4.15), “I love China” have a lowest mean value (mean=3.95).

Revisit intention

Table 2 Descriptive statistic results of revisit intention

Intention to revisit China	mean	SD
I like to visit China again	4.14	.811
I may stay longer in China during my next visit	4.18	.771
I strongly recommend people to visit China	4.27	.801

According to Table 4.2, Most respondents are “strongly recommend people to visit China” (mean=4.27), followed by “I may stay longer in China during my next visit”(mean=4.18), “I like to visit China again” have a lower mean value (mean=4.14).

Test of the differences between demographic groups

The t-test was used to identify whether there was a difference in revisiting intention between gender groups. Then one-way ANOVA was used to identify whether there were differences between other demographic groups in this research. The results presented that there were some statistically significant in revisiting intention among other demographic groups. Such as Age group, Frequency to travel China, Purpose of to China, Length of stay. The p value was less than 0.05. Through the analysis of personality differences by t-test, it is found that the frequency of men 232 is slightly higher than that of women 175, and the standard deviation is 65 and 51. When analyzing the travel types of tourists through, it is found that the personal frequency 265 is much less than the female frequency 242. Therefore, it can be found that the number of female tourists accounts for more.

Correlation analysis

From the analysis results showed that Destination Image, Country Personality, Tourist Attitude, Revisit Intention, the four dimensions’ P value is not all less than 0.05. Independent variable Destination Image and the Tourist Attitude and the dependent variable Revisit Intention has significant positive correlation ($P < 0.05$), And have strong correlation; Independent variable Country personality with the Tourist Attitude not has significant positive correlation ($P > 0.05$), the correlation is weak. and with the dependent variable Revisit Intention has significant positive correlation ($P < 0.05$).

Table 1 Correlation

		Destination Image	Country Personality	Tourist Attitude	Revisit Intention
Destination Image	Pearson Correlation	1	-.154**	.312**	.271**
	Sig. (2-tailed)		.002	.000	.000
	N	407	407	407	407
Country Personality	Pearson Correlation	-.154**	1	-.017	-.101*
	Sig. (2-tailed)	.002		.728	.041
	N	407	407	407	407
Tourist Attitude	Pearson Correlation	.312**	-.017	1	.464**
	Sig. (2-tailed)	.000	.728		.000
	N	407	407	407	407
Revisit Intention	Pearson Correlation	.271**	-.101*	.464**	1
	Sig. (2-tailed)	.000	.041	.000	
	N	407	407	407	407

***. Correlation is significant at the 0.01 level (2-tailed).*
**. Correlation is significant at the 0.05 level (2-tailed).*

Hypothesis testing

Testing hypothesis 1, hypothesis 3 and hypothesis 5 by using multiple regression

Table 4 Results on the effects of destination image, tourist attitude on revisit intention

variables	Unstandardized coefficients B	Standardized coefficients Beta	t	Sig	Tolerance	VIF
Constant	1.422		4.545	.000		
Destination Image	.231	.076	3.041	.003	.903	1.108
Tourist attitude	.0447	.049	9.177	.000	.903	1.108

R=0.483, R^2=0.233, Adjusted R^2=0.229, F=61.433 $P<0.05$

According to Table 4.4, the result shows that there is 23.3% (R^2=0.233) of the variance in the dependent variable (revisit intention) which can be explained by two independent variables (destination image, tourist attitude).

The result reveals that the destination image ($p<0.05$), tourist attitude($p<0.01$), so destination image and tourist attitude toward destination have a significant effect on tourists' revisit intention because the p value of independent variables were less than 0.05. Thus, hypothesis 1, hypothesis 3 and hypothesis 5 were accepted.

Testing hypothesis 2 by using multiple regression

Table 5 Results on the effects of country personality on tourist attitude

variables	Unstandardized coefficients B	Standardized coefficients Beta	t	Sig	Tolerance	VIF
Constant	4.179		20.756	.000		
Country personality	-.023	-.017	-.348	.728	1	1

$R=0.17$, $R^2=0.00$, Adjusted $R^2=-0.002$, $F=.121$ $P>0.05$

According to Table 4.5, the result shows that there are nearly 0% ($R^2=0.000$) of the variance in the dependent variable (tourist attitude) which can be explained by the independent variables (country personality).

The result reveals that country personality ($p>0.05$), so country personality had no significant effect on tourist attitude because the p value of independent variables were more than 0.05. Thus, hypothesis 2 was rejected.

Conclusion, discussion, limitation and recommendation

Conclusion

The findings revealed that there was a significant effect of the destination image on tourists' attitude, there was a significant effect of country personality on revisiting intention, there was a significant effect of tourists' attitude on revisiting intention. Thus, the hypothesis 1, the hypothesis 3, the hypothesis 4, and the hypothesis 5 of this study were accepted. Hypothesis 2 was rejected.

The findings showed that tourists' gender and travel type didn't make any difference in revisiting intention. Age group, frequency to travel China, the purpose of to China, length of stay that can make a difference in revisit intention. Destination image has an effect on tourist's attitude toward destination and revisit intention. Country personality has an effect on revisiting intention, but there was no effect on tourist's attitude to destination. Tourist's attitude toward destination has an effect on revisiting intention.

Discussion

Supported by previous researches. Many studies in the literature (Beerli and Martin, 2004; Lee et al., 2005; Konecnik and Gartner, 2007) have discussed good destination image positive effects on tourist attitudes towards a destination. Tourists' overall attitudes towards a destination and their behavioural intentions are significantly shaped by the destination image (Jalilvand et al., 2012; Deng and Li, 2014). These findings have also supported the previous study conducted by Kim and Richardson (2003) and Phillips and Jang (2008), who argued destination image influences tourists' tourism products and services related attitudes and behaviour. Thus, based on the above discussion the hypotheses 1 are accepted.

Six dimensions of the national personality were taken into account in this research. From the analyzed result can show that agreeableness and assiduousness had a significant effect on tourist attitude. The other 4 dimension all have no significance on tourist attitude. That's the reason why the hypothesis 2 was rejected. There were some parts of these findings supported by d'Astous & Boujbel (2007). The study showed the wickedness, snobbism, conformity and unobtrusiveness dimensions were not significant.

The results have been demonstrated by previous investigators. Two dimensions of destination image (natural attraction and infrastructure) had positive relationships with revisit intention in the context of the destination images. The findings of this research concurred with a previous study which examined Chinese tourists in Korea (Lee et al., 2011). The study revealed that Chinese tourists had a higher expectancy of destination quality which involved good and more natural attraction that led to the intention to revisit. Infrastructure were important factors to influence tourists. The attraction was significant to European tourists in Singapore (Hui et al., 2007). Also, Chi and Qu (2008) found that natural attraction and infrastructure had significant and positive effects on the revisit intention to Eureka Springs.

As for natural attraction, it was in line with the findings by Qu et al. (2011). Their study showed that natural attractions were a reason that attracted tourist. The scenery, natural scenic beauty, and an adventure atmosphere were amongst the major factors that led to the intention to revisit. In China, the location of the present study is well-known for its natural attraction such as mountain and historic scenery. This gives it a competitive advantage as a tourist destination. It is the most popular tourist destination amongst local and international tourists. This natural tourism destination in China should be sustained to enhance the destination image.

Implication

According to the data analyzed result, Tourism managers and marketers in China should make every effort to enhance the destination image and attitude of Thai tourists towards China. For the image of the destination, the tourist organization or agency may announce or develop a more natural attraction for Thai tourists.Due to the mean value of five measurement dimension have the biggest one. And improve the social atmosphere and environment, the tourism organization or agency can organize more local activities for Thai tourists to enable them to access the local culture of China. In order to let the Thai tourist return to China, the government or travel agency must show the positive personality of the country to the Thai tourist.

Limitation and suggestion

The present study has some limitations that need to be taken into account when considering a discussion on the merits of its findings. First, the results are limited to the sample size. Second, the findings of this research are specific to one country (China) and cannot be generalized to others. Third, the present study focused on general customers (who have already visited / and who did not visit) perception about a country and therefore the results may not be generalizable to other useful outcomes such as intentions to purchase. This study also seems to complement the one conducted by d'Astous & Boujbel (2007) in particular with regards to the following details: in addition, a new translation of the scale and its validation was performed, and a Thai version of the original language adjectives (French, and English afterwards by the scale authors) became available.

References

Aktan, M., & Chao, P. W. (2016). Impact of Country Personality on Attitude Toward Foreign Products: Self-congruity as a Mediator. *Atlantic Marketing Journal*, *5*(1), 9.

Beyond summits (2016). China Inbound Tourism Market Research Report. Page19-24

Echtner, C. M., & Prasad, P. (2003). The context of third world tourism marketing. *Annals of Tourism research*, *30*(3), 660-682.

Hai, Z. X., & Jiang, W. B. (2011). Chinese dynamic economy image in the German media in economic crisis: Take reports from 2009 to 2010 released by Der Spiegel Magazine and The Times weekly in Germany for example. *Deutschland-studien*, *26*(1), 39-48.

Hua, Y. S. (2005). A Study on the Chinese Consumer' Selection of Korean Products (Doctoral dissertation). Tsinghua University, Beijing

Kim, S. B., & Kwon, K. J. (2018). Examining the Relationships of Image and Attitude on Visit Intention to Korea among Tanzanian College Students: The Moderating Effect of Familiarity. *Sustainability*, *10*(2), 360.

Kim, S. B., & Kwon, K. J. (2018). Examining the Relationships of Image and Attitude on Visit Intention to Korea among Tanzanian College Students: The Moderating Effect of Familiarity. *Sustainability*, *10*(2), 36

Mossberg, L., & Kleppe, I. A. (2005). Country and destination image–different or similar image concepts?. *The Service Industries Journal*, *25*(4), 493-503.

Souiden, N., Ladhari, R., & Chiadmi, N. E. (2017). Destination personality and destination image. *Journal of Hospitality and Tourism Management*, *32*, 54-70.

Wang, C. L., Li, D., Barnes, B. R., & Ahn, J. (2012). Country image, product image and consumer purchase intention: Evidence from an emerging economy. *International Business Review*, *21*(6), 1041-1051.

Yu, Z. (2007). China Image Appeared in Japanese Newspapers: a Case Study of China Reports in Asahi Shimbun and Yomiuri Shimbun (1995-2005)[J]. *Journalism & Communication*, *4*.

Zeugner-Roth, K. P., & Žabkar, V. (2015). Bridging the gap between country and destination image: Assessing common facets and their predictive validity. *Journal of business research*, *68*(9), 1844-1853.

ZHANG, H., LU, L., CAI, L., & HUANG, Z. (2011). Tourism destination image structural model and visitors' behavioral intentions: based on a confirmatory study of localization of potential consumers [J]. *Tourism Science*, *1*, 35-45.

Zhang, H., Xu, F., Leung, H. H., & Cai, L. A. (2016). The influence of destination-country image on prospective tourists' visit intention: Testing three competing models. *Asia Pacific Journal of Tourism Research*, *21*(7), 811-835.

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

ONLINE PRODUCT INFORMATION CHARACTERISTICS EFFECT ON PRODUCT INFORMATION SHARING IN THAILAND

Liu Liang[1] and Liu Mengdi[2]
[1]Su Xin Jewelry Art Co., Ltd in Fushun, Liaoning Province, China
[2]Ph.D. of Organization Development Candidate in Assumption University of Thailand
[1]Au2007@hotmail.com, [2]Liumengdi0615@gmail.com

Abstract

Based on a review of previous studies, a model of online product information characteristics' effects on consumers' product information sharing behaviors was formulated, analyzed and developed using data collected through a self-administered questionnaire from a target sample of 400 consumers. The characteristics of online product information are represented by three constructs (product information visualization, interactivity, and credibility), which influence consumer cognitive behaviors related to perceived fluency, perceived usefulness and in turn product information sharing. Many of the findings that relate to the direct effects of the variables in previous studies were confirmed. However, there were new findings that relate to the significant direct, indirect and total effects of product information visualization, interactivity and credibility on product information sharing with the use of Structural Equation Modeling (SEM). Apart from the theoretical contribution of the study, specifically the inclusion of the indirect and total effects, practical implications were also noted. These are discussed with the objectives of improving online product quality and visibility that would have positive consequences for consumer cognitive behaviors and especially for product information influence expansion. Importantly, the study addresses the limited number of previous studies conducted with regard to consumers' behaviors in current online environments.

Keywords: Online product information characteristics; Stimulation-organism-model; Technology acceptance model; Perceived fluency; Product information sharing

Introduction

The development of online purchasing platform with the support of the latest information technology system is creating many opportunities for enterprises to attract and service customers by using several information resources.These new characteristics of online product information cater to the diversified information demands of the consumers, who would like to access useful product information resources that will aid them in evaluating the value of product as well as in realizing their emotional closeness with the goods.Although many enterprises have invested in online sales process, many of them are not fully aware of the characteristics of online product information thus, there is this urgent need for these enterprises to develop strategies that will enhance their competitive advantage over others, and have positive influence on consumer's product information cognitive behaviors. Thus, the purpose of this present study is to examine the characteristics of online product information that affect consumer's product information sharing behaviors in Thailand.

This present study holds the distinction to be one of the few studies that explore online product information for enterprises and consumers. The findings will theoretically be relevant as it did not only investigate direct effects but indirect and total effects as well. Practicality-wise, the findings of this present study are taken from its theoretical findings.

Related literature and model constructs

Overview of previous studies

Table 1 presents the findings of the previous studies related to online product information characteristics and consumer's product information cognitive behaviors especially in terms of the information sharing behavior of consumers in online marketing environments. This overview focuses on studies that used quantitative and qualitative methods to evaluate theoretical causal models.

Table 1 The overview of related studies

Theory	Behavior Examined	Focus of Study	Constructs Studied
Stimulation-Organism-Response Model	To explore the consumer purchasing response	Investigation of how products stimulate consumers to respond.	Situation, Product, Consumer, Behavior
Reference	Belk, (1975)		
Technology Acceptance Model	To explain the individual's technology acceptance behavior	To focus on the individual's usage behavior of technology with the concept of cognitive behavior.	External Environment, Perceived Usefulness, Perceived Ease of Use, Usage Behavior
Reference	Davis, (1989)		
Information Quality	Assessment of the quality of healthcare information	How to organize, develop and deliver information products or services.	Information Product or Service: Conformance, Consumer Expectations, Useful, and Dependable
Reference	Kahn et al., (2002)		
Information Use Environments Theory	It is critical to understand the search process as this will affect how the value of information is determined.	It is the set of elements that affects the flow and use of information messages and determines the criteria by which the value of information messages will be judged.	Sets of people, typical structure and thrust of problems of those sets of people, typical settings, and what constitutes resolution of problems
Reference	Taylor, (1991)		
Information Retrieval Behavior	Web Search Behavior	Study behavior at the micro-level where users interact with information to perform tasks.	Information, organizations, and presentation; Types of search task; Web experience; Cognitive abilities; Affective states; and Interaction
Reference	Hsieh-Yee, (2001)		
Dual Coding Theory	Exploring information processing ability in human mind aids learning.	To explain human behavior and experience in terms of dynamic associative processes that operate on a rich network of modality-specific verbal and nonverbal representations.	Visual and verbal information, Different information channels in human mind, creating separate representations for information processing
Reference	Paivio, A., (2007).		
Information Structure	To present how the information is formally packaged within a sentence	It focuses on the linguistic and pragmatic description of information structure within a sentence.	Focus and Background, Topic and Comment, Given and News
Reference	Krifka, M., (2008)		
Information Grounds Theory	To explore how nurses, the elderly and other individuals share human healthcare information services.	To identify the synergistic environments temporarily created by the people who group together for a singular purpose but from whose behavior emerges a social atmosphere that fosters the spontaneous and serendipitous sharing of information.	Physical environment, Clinic's activities, Nurse's situation, Patient's condition, and Information sharing
Reference	Pettigrew,K.E.,&Mckechnie, L., (2001)		
Social Networking Information Ecosystem	Information Sharing	Information sharing between subjects in the network, and a chain of dependency	Information consumer and producer, question, and answer interaction.
Reference	Zhang Xiangxian et al., (2014)		

Model constructs

Based on the overview presented in Table 1, it was deemed appropriate to develop a theoretical model based on an extension of the Stimulation-Organism-Response Model and Technology Acceptance Model using six behavioral constructs organized into two groups (the characteristics of online product information and consumer's product information cognitive behavior). The said constructs were identified in previous studies as having important relationships with consumer's product information sharing behavior in online environments.

Three constructs represent Online Product Information Characteristics:

Product Information Visualization: Information visualization reflects visual representations (or interaction techniques) of abstract information to reinforce human cognition, which allow users to see, explore and understand large amounts of information at once, which is a creation approached for conveying numerical and non-numerical data in intuitive ways (Thomas & Cook, 2006; Munzner, 2008). So, product information visualization means visualization technology is put into use in non-spatial data domain, which is the process of online product information transforming through picture processing, user interface, computer vision, computer modeling and so on (Bederson & Shneiderman, 2003). Furthermore, related product information content and attribute are transformed in creating visual forms by taking on "three-dimensional" and "visualization" perspectives (Sadiku et al., 2016). The information is presented in a most intuitive approach, which could motivate consumers to intuitively discover the product information content and potential features, relationships and patterns, and then quickly understand the related abstraction of product information descriptions (Conati, et al., 2015).

Product Information Interactivity: Generally, interactivity is specific to information exchange through online media, which relates to the concepts of user control, active control, synchronicity, timeliness, bidirectionality and responsiveness (McMillan & Hwang, 2002; Liu & Shrum, 2002; Yadav & Varadarajan, 2005; Rafaeli & Ariel, 2007). Consequently, interactivity is considered applicable to online product information as it describes the capability of the consumer to use online media to communicate with the manufacturer (or other clients who are interested in those related products;) and access hypermedia content (Hoffman & Novak, 1996; Newhagen, 2004). Adopting this phenomenon, increasing levels of product information interactivity may allow consumers who are using an online shopping environment to gain greater controlling experience of purchasing in the shortest possible time, which is consequently associated with increased cognitive experience (Defleaur, 2017). Furthermore, increased levels of product information interactivity in an online shopping environment are expected to have a positive relationship with an individual's cognitive experience and behavior (Fiore et al., 2005; Paul, 2005).

Product Information Credibility: Information credibility indicates the extent to which one perceives information to be acceptable, which also generates a sense of trust and compliance, and mainly use a certain prestige from information subject to forecasts the information user's further actions (Deimen, et al., 2015; McKnight & Kacmar, 2006, Harris et al., 2011). There are two clues that present information user's acceptance behavior towards the information: (1) the central clue requires lots of diligent consideration of information factors such as information content, information source and argument strength of information; and (2) the peripheral clue, which is a consideration with less cognition performance but focuses on information—irrelevant factors that influence information user to access the information such as information channel and information ground factors (Pettigrew, 1999; Vieira, 2014). The effects of central and peripheral factors on people's perception of information credibility can be shifted by the information user's motivation and ability (Petty et al., 1987). So, when the consumer has high level of ability to evaluate the online product information credibility, he or she would like to take the central route that considers product information content very carefully. Also, the qualified product information can produce a sense of trust and dependence for the consumers when the arguments of product information ground are not sufficient (Chaiken & Masheswaren, 1994). Furthermore, the consumer would like to do product information producing and understanding based on the related clues if information source is in a climate of high professionalism (Petty et al., 1983). In addition, the consumer will take peripheral clue that put effort to evaluate medium that provides product information if he or she has minor level of ability to evaluate product information credibility. Specifically, the product information channel with better reliability and validity can make the information users believe the clues with less doubts (Reinhard et al., 2011; Cosenza et al., 2015).

On the other hand, three constructs represent Consumer's Product Information Cognitive Behavior:

Perceived Fluency: Perceived fluency consists of the difficulty levels of perception and experience about information transaction course in which the individual can make use of the characteristics of information surface properties. The subjective experience of information transaction also influences the weight assignment and degree of attention to different information scents during information transaction course (Claypool et al., 2015; Deckert, 2015). Generally, the information scent with a high perceived fluency value will produce high weight assignment and degree of attention to information transaction comparing with the information scent with low perceived fluency value (Shah & Oppenheimer, 2007). There are two functions for information transaction course: (a) analytic processing, which is the process of information analysis and cognition from the greatest possible consideration; and (b) heuristic processing, which is the shallow parsing and cognition for information transaction with less attention and cognitive resources. Perceived fluency has a direct impact on information user's cognition through the characteristic of information surface features, which also motivates information user to accept different information transaction methods that indirectly affect information user's cognition process (Alter et al., 2007). Furthermore, high perceived fluency always encourages related information user to select heuristic processing for information transaction and cognition. On the contrary, analytic processing will be selected if the information caricaturists cause low perceived fluency (Shah, Oppenheimer,2008). Therefore, information fluency is the ability to unconsciously interpret product information in all possible forms in order to extract related essential knowledge, meaning and significance, which is used to complete purchasing tasks and problems effectively in the real-world.

Perceived Usefulness: Generally, people would like to evaluate the results of their behaviors and these behaviors are based on the degree to which they believe the actions that they chose would enhance their expectation value. This then indicates that perceived usefulness is the most important factor affecting people's acceptance behavior (Davis, 1989; Mathieson et al., 2001; Venkatesh et al., 2012). So, the high perceived usefulness to online product information environment means the strong positive usage performance (Davis, 1989). Also, perceived usefulness was not only defined as online product information usage behavior leading to enhancement in online purchasing consequences, but it also refers to making purchasing decision easier and more satisfying, which reduces purchasing costs as well as improve quality of online product information (Venkatesh et al.,2003; Shekelle et al., 2006).

Product Information Sharing: Information sharing is a kind of essential behavioral expression that creates a mechanism for coordination and integration of the processes or activities along information flow (Lee & Whang, 2000; Pujara & Kant, 2015).Information sharing relates to the activities of distributing useful information among people, system or the unit in an open environment, which address "what to share," "how to share," and "when to share," which could minimize information cost, information deficiency or overload and improve information responsiveness (Sun & Yen, 2005). This could help manufacturers to gain competitive advantage and ensure product availability in online flagship platform as this is largely being influenced by how related product information is in the current online communication platform (Mason-Jones & Towill, 1998; Ramayah & Omar, 2010). Besides, in order to ensure that the consumer's online product information requirement can be fulfilled, product information sharing is fundamental to manage the online product information flow associated with the movement of product information to another interested customers (Singh, 1996). Furthermore, effective online product information flow is dependent on information sharing among its customer group (Lee et al., 1997). The manufacturer would be able to respond effectively to the changing of market demand requirements through information sharing (Daugherty et al., 1995; Mason-Jones & Towill, 1997).

Theoretical model

The theoretical model in Figure 1 is notated to indicate the eight research hypotheses associated with direct causal effects. There are two groups of variables representing the characteristics of online product information and consumer's product information cognitive behavior. The variables that represent the characteristics of online product information are exogenous, two of the three consumer's product information cognitive behavior variables are endogenous intervening (mediating) variables and the three (product information sharing) is the endogenous dependent variable.

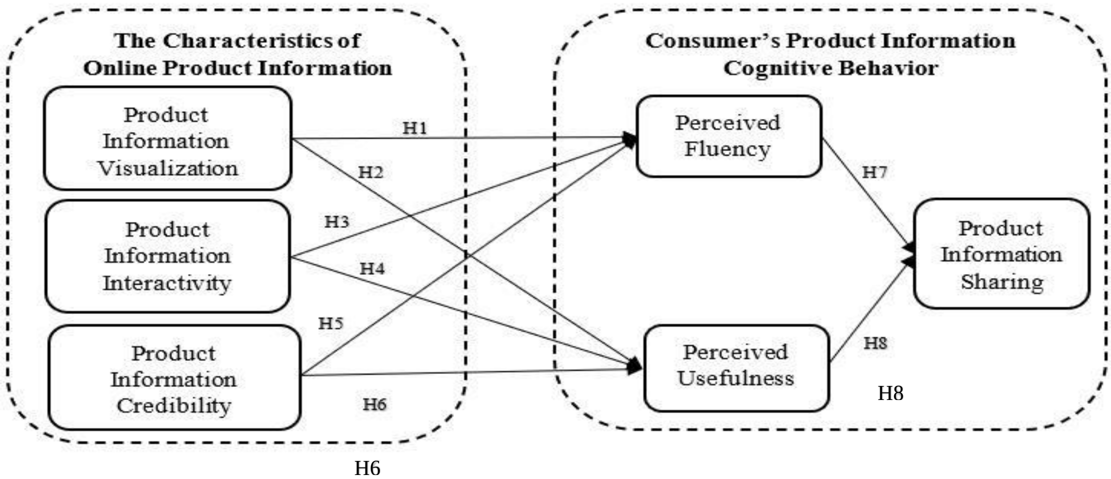

Figure 1 Theoretical model

The eight hypotheses associated with the direct effects in Figure 1 are stated in Table 2 which includes references that motivated the formulation of the hypotheses.

Table 2 Research hypotheses for direct effects

No.	Research Hypothesis
H1	Product Information Visualization has a significant positive influence on Perceived Fluency
H2	Product Information Visualization has a significant positive influence on Perceived Usefulness
H3	Product Information Interactivity has a significant positive influence on Perceived Fluency
H4	Product Information Interactivity has a significant positive influence on Perceived Usefulness
H5	Product information Credibility has a significant positive influence on Perceived Fluency
H6	Product information Credibility has a significant positive influence on Perceived Usefulness
H7	Perceived Fluency has a significant positive influence on Product Information Sharing
H8	Perceived Usefulness has a significant positive influence on Product Information Sharing

However, it should be noted that there is no research hypothesis in Table 2 that concerns indirect effects, which is considered as the limitation of this present research. For further understanding, the Structural Equation Modeling (SEM) analysis was used to analyze, report and identify whether there are any significant mediation effects existing among the studied variables.

Table 3 shows the labels for the indicators, which were measured on five-point Likert scales and treated as interval scale measures.

Table 3 Definitions and measurement of model variables

Variable (Indicators)	Definition The extent to which:
Product Information Visualization (PV1-5)	Online product information provided by the enterprise is: attractive, reliable, accurate, comprehensive, and guides influence consumer's perception about its product
Product Information Interaction (PI1-5)	The enterprise understands consumer needs and answers purchasing questions from consumers appropriately. And the online product information is helpful for the consumer to understand product features and attributes, make purchasing decision.
Product Information Credibility (PC1-5)	Online product information provided by the enterprise is believable, suggestive, instructive, attributive, and an important stimulus for product cognitive activities.
Perceived Fluency (PF1-4)	The activity of using the enterprise's online information behavior is perceived to be simplicity, flexibility, detailed, and apart from any anticipated product performance consequences.
Perceived Usefulness (PU1-5)	Online product information provided by the enterprise is: valuable, easy, satisfying, and qualified for the consumer to maintain their attentions.
Product Information Sharing (PS1-6)	Overall, the enterprise and consumer expectations are satisfied by the performance of its online product information.

Data preparation and descriptive analyses

This section presents the results of analyses. The discussion of these results is addressed in the next section.

Data preparation

A cross-sectional field study was used to collect the data with a self-administered questionnaire in Thai version, which was designed to measure the personal characteristics of the respondents and variables in the theoretical model. Thai version of the questionnaire was prepared and reviewed by a focus group of five experts. Suggested modifications concerned mainly with language expression, different knowledge background and sociocultural background, which were then included in the revised versions of the questionnaire. A pilot study was conducted with a sample of 10 suitable respondents in order to make sure there is no further modifications required in the full study.

The subjects were individuals in

Thailand who had online purchasing experience. In Thailand, the size of this population certainly exceeds 100,000. Consequently, with 5% precision and a 95% confidence level a minimum sample size of 400 was determined which satisfied the criteria for the statistical validity of this present study (Kline, 2016). Since no reliable sampling frame was available, a purposive sampling method was used. Questionnaires were distributed to members of the target population using online platforms to direct participants to the questionnaire.

Data from 561 questionnaires were entered into an SPSS worksheet and a random selection of 10 percent (56) was checked for accuracy of data entry. No errors were found and none of the questionnaires included missing values or an outlier measure for any of the indicators for the latent variables.

Principal Component factor analysis was used to examine the construct validity of the latent variables. This required indicators to load onto only the latent variable that they were proposed to measure with a factor loading of at least 0.4 in magnitude and an associated eigenvalue of at least 1 (Straub & Gefen, 2004). The equivalence reliability of the sets of indicators was assessed using Cronbach alpha coefficients. The satisfactory results for construct validity and equivalence reliability are shown as part of Table 5.

Participants and model variables

Descriptive statistics for the distributions of the personal characteristics of the 561 participants are summarized in Table 4.

Table 4 Descriptive statistics for personal characteristics

Characteristic	Descriptive Statistics
Gender	302 males (53.8%) and 259 females (46.2%)
Age (Years)	*Mean* = 24, *Median* = 18, *Mode* = 18 (54%), *Standard Deviation* = 9
Level of Education (Years)	*Mean* = 14, *Median* = 14, *Mode* = 14 (36%), *Standard Deviation* = 2
Monthly Income (Thai Baht)	*Mean* = 16747, *Median* = 10000, *Mode* = 2500 (31%), *Standard Deviation* = 15127
Monthly Expenditure (Thai Baht)	*Mean* = 12050, *Median* = 10000, *Mode* = 10000 (41%), *Standard Deviation* = 10798
Device used to access the internet	*Mode = Smartphone (63%)*
Communication channel used to share product information	*Mode* = *Online Social Media* (55%)
Internet Usage (Hours)	*Mean* = 5, *Median* = 5, *Mode* = 3 (16%), *Standard Deviation* = 3

Table 5 includes descriptive statistics for the indicators of model variables.

Table 5 Model variables: validity, reliability and descriptive statistics

Variable and Indicator		Validity/ Reliability			Descriptive Statistics			
		Factor Loading	Eigen value (% of Variance)	Cronbach Alpha	Mean	Standard Deviation	Skewness	Kurtosis
Product Information Visualization	PV1	.76	2.0 (6.5)	.94	3.22	1.11	-.07	-.88
	PV2	.71			3.08	1.10	-.01	-.79
	PV3	.78			3.12	1.11	.04	-.74
	PV4	.77			3.05	1.16	.07	-.88
	PV5	.71			3.14	1.11	.02	-.83
Perceived Fluency	PF1	.84	1.0 (3.4)	.89	3.49	.91	-.08	-.36
	PF2	.75			3.40	1.02	-.10	-.70
	PF3	.75			3.32	.98	-.14	-.46
	PF4	.80			3.38	1.02	-.10	-.64
Perceived Usefulness	PU1	.71	1.1 (3.8)	.93	3.10	1.07	.00	-.67
	PU2	.66			3.21	1.07	-.07	-.74
	PU3	.72			3.19	1.02	-.07	-.59
	PU4	.70			3.08	1.14	.00	-.81
	PU5	.69			3.12	1.08	.01	-.65
Product Information Interactivity	PI1	.70	1.5 (5.1)	.90	3.34	.97	-.13	-.46
	PI2	.77			3.37	.97	-.17	-.32
	PI3	.76			3.38	.99	-.13	-.46
	PI4	.69			3.32	.96	.01	-.63
	PI5	.72			3.35	.95	-.02	-.45
Product Information Credibility	PC1	.74	1.7 (5.7)	.92	3.13	1.03	.04	-.65
	PC2	.77			3.02	1.08	-.01	-.87
	PC3	.69			3.09	1.02	.18	-.62
	PC4	.73			3.12	1.06	.09	-.61
	PC5	.72			3.25	.98	.12	-.55
Product Information Sharing	PS1	.81	15.7 (52.3)	.92	3.29	1.04	.05	-.66
	PS2	.79			3.22	1.02	.23	-.68
	PS3	.86			3.10	.98	.00	-.56
	PS4	.77			3.07	1.00	.09	-.59
	PS5	.49			3.32	.97	.05	-.80
	PS6	.57			3.34	1.01	.16	-.89

Note for factor analysis: *Extraction Method: Principal Component Analysis. Rotation Method: Equamax with Kaiser Normalization. Rotation converged in 6 iterations. Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.964. Bartlett's Test of Sphericity Approx. Chi-Square = 14662.269, df = 435, Significance = 0.00. Components with eigenvalues less than 1 are not shown. Percentage of total variance explained = 76.654%.*

From Table 5, it is seen that the magnitudes of skewness and kurtosis for each indicator are within the acceptable limits of 3 and 7, respectively, which are the ones required for the use of maximum likelihood estimation in SEM analyses (Kline, 2016). For the purpose of descriptive analyses, the latent variables were converted into single interval scale measures using the weighted mean of the values of their indicators with the standard deviations as the weights. These single-scale measures are used only in the following descriptive analyses. The separate values of the indicators were used in the SEM analyses.

T-tests showed that the mean values of the model variables were significantly greater than the neutral value of 3 on their 5-point scales except for PV2, PV4, PIC2, PU4, PS4 where the mean was not significantly different from 3 ($p < 0.05$).

Correlations among variables are shown in Table 6 where bold type indicates statistical significance at a level of 0.05 or less.

Table 6 Correlations

Variables	Age	Ed	I	E	U	D	C	PV	PI	PIC	PU	PF	PS
Education (Ed)	**.160**	1			**Personal Characteristics**								
Income (I)	**.197**	.072	1										
Expenditure (E)	.006	.042	**.129**	1						**Model Variables**			
Hours/Day (U)	-.013	.043	-.027	-.064	1								
Device (D)	**.144**	-.002	**.100**	.040	.081	1							
Channel (C)	**-.111**	-.027	-.047	**-.096**	.005	.030	1						
Product Information Visualization (PV)	**-.356**	**-.094**	**-.245**	**-.210**	.028	**-.146**	**.098**	1					.
Product Information Interactivity (PI)	**-.288**	-.079	**-.192**	**-.239**	.052	**-.108**	**.127**	**.646**	1				
Product Information Credibility (PC)	**-.316**	-.058	**-.243**	**-.175**	.012	**-.192**	.058	**.684**	**.584**	1			
Perceived Usefulness (PU)	**-.357**	**-.090**	**-.214**	**-.172**	.001	**-.158**	**.101**	**.738**	**.660**	**.719**	1		
Perceived Fluency (PF)	**-.286**	**-.095**	**-.172**	**-.118**	.037	**-.125**	.074	**.527**	**.567**	**.573**	**.582**	1	
Product Information Sharing (PS)	**-.314**	**-.156**	**-.234**	**-.192**	.001	**-.177**	**.086**	**.628**	**.609**	**.628**	**.642**	**.485**	1

From Table 6, all of the coefficients associated with causal effects in the theoretical model are significant and positive. There are four significant correlations that suggest plausible effects that may be added to the theoretical model (Product Information Visualization, Product Information Interactivity, and Product Information Credibility → Product Information Sharing; Perceived Fluency → Perceived Usefulness). These plausible additions are considered in the next section as part of the development of the model.

Model analyses and development

Figure 2 shows the results of the SEM analysis using Amos software for direct effects in the theoretical model. The notations * and NS indicate statistical significance at a level of .05 or less and not statistically significant at that level, respectively. Unstandardized effects are shown first with standardized effects in parentheses and an interpretation of their magnitude according to Cohen (1988): ≤ 0.1 indicates a small effect (S); between 0.1 and 0.5 a medium effect (M); and ≥ 0.5 a large effect (L). These notations are used throughout all of the results for model analyses.

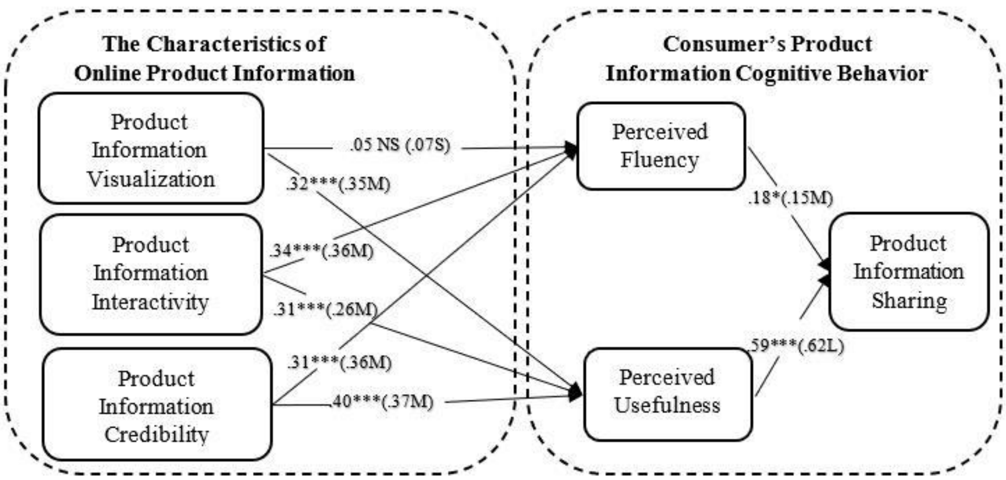

Figure 2 Direct effects in theoretical model

Table 7 shows a range of fit statistics for the theoretical model as recommended by Kline (2016).

Table 7 Fit statistics for theoretical model

Theoretical Model	N	Normed Chi-square (NC = χ^2/df)	RMR	GFI	AGFI	NFI	IFI	CFI	RMSEA
	516	1199.865/394 = 3.05	0.063	0.873	0.850	0.920	0.95	0.945	0.060
		R^2: PU (0.76), PF (0.50), PS (0.51)							

From Table 7 it is seen that the fit statistics RMR, GFI and AGFI are slightly less than satisfactory, and the effect of Product Information Visualization on Perceived Fluency in Figure 2 is small and not statistically significant. Consequently, it is desirable to seek an improved model. Three additional direct effects suggested by the significant correlations in Table 5 were added to the theoretical model and, together with the effect of Product Information Visualization on Perceived Fluency, these five effects were made optional in a specification search using Amos. The 32 models in the hierarchy were analyzed and among these the model with the least value for NC was selected as the final model (Kline, 2016). Fit statistics for the final model are shown in Table 8 and direct effects are shown in Figure 3.

Table 8 Fit statistics for final model

	N	Normed Chi-square (NC = χ^2/df)	RMR	GFI	AGFI	NFI	IFI	CFI	RMSEA
Final Model	516	1134.882/392 = 2.895	0.053	0.876	0.853	0.924	0.949	0.949	0.058
		R^2: PU (0.741), PF (0.492), PS (0.567)							

The final model has improved fit statistics and reasonable proportions of the variance of the endogenous variables (R^2) are explained by the model.

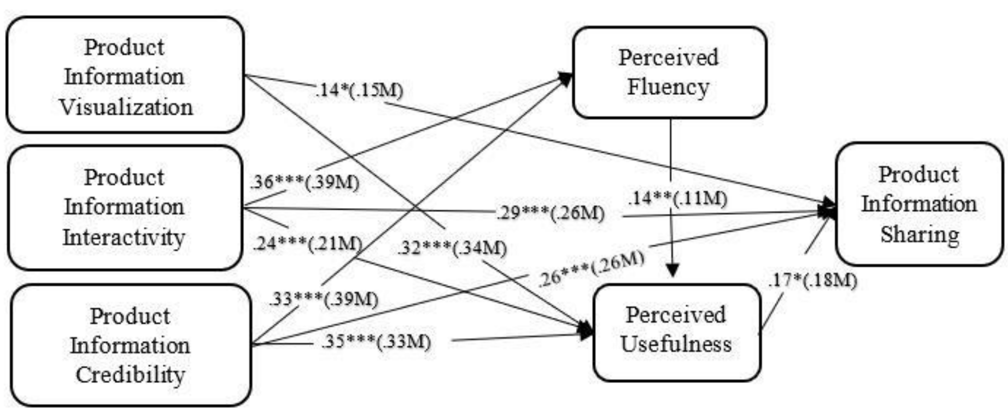

Figure 3 Direct effects in final model

Table 9 shows the indirect effects, the totals of indirect effects, and the totals of indirect and direct effects in the final model.

Table 9 Indirect effects and total effects in final model

Causal Variable	Indirect Effects on Product Information Sharing			Total Effects		
	Mediating Variable		Total of Indirect Effects	Affected Variable		
	Perceived Fluency	Perceived Usefulness		Perceived Fluency	Perceived Usefulness	Product Information Sharing
Product Information Visualization	Nil	.02NS (.03S)	.02 NS (.03S)	Nil	.32***(.34M)	.16** (.18M)
Product Information Interactivity	.01NS(.01S)	.04NS(.04S)	.05*(.05S)	.36***(.39M)	.29***(.38M)	.34***(.31M)
Product Information Credibility	.02NS(.01S)	.06*(.06S)	.08**(.07S)	.33***(.39M)	.46***(.37M)	.34***(.33M)
Perceived Fluency	Nil	.02NS(.02S)	.02NS(.02S)	Nil	.14**(.11M)	.02NS(.02S)
Perceived Usefulness	Nil	Nil	Nil	Nil	Nil	.17*(.18M)

Note: *The statistical significance of indirect effects was determined following Cohen and Cohen (1983); and total effects were determined using nonparametric bootstrapping with 1,000 random samples.*

Discussion of the findings

Participants

From Table 4, it is evident that the participants are young, well educated and have relevant experiences in online purchasing. None of the variables included in the model were considered to be unimportant in relation to online behaviors. Besides, T-test also showed that there were no significant differences between males and females except that females had significantly more values of income level and information device compared to males. From Table 6, it is seen that compared to younger participants, the older participants have high monthly incomes and earned higher formal education. However, on a daily basis and selected information channel, the older participants did not significantly use the internet as often as their younger counterparts. None of the personal characteristics was correlated significantly with any of the characteristics of online product except information channel selection.

Research hypotheses for direct effects

The findings supported all of the eight research hypotheses for their direct effects (Table 2) except for *H1: product information visualization has a significant positive influence on perceived fluency*. Consequently, there is no evidence to suggest that increasing product information visualization will lead to significant increases in perceived fluency among consumers. However, from Table 6, it is evident that consumers who derive most fluency from product information visualization consider such information to be attractive, comprehensive, reliable and accurate.

Indirect and total effects

The analyses of indirect and total effects provide more accurate and detailed information than is obtained by only considering direct effects. From Table 9, the five separate indirect effects of product information visualization, interactivity and credibility on product information sharing demonstrateda small yet not statistically significant effects except the product information credibility on product information sharing through perceived usefulness, which turned out to be statistically significant. Also, the totals of the indirect effects on product information sharing are small and statistically significant for product information interactivity and credibility, and not statistically significant and small for product information visualization.

In Table 9, all of the total effects in the final model are statistically significant, positive and medium in magnitude except perceived fluency. Considering the standardized total effects on product information sharing, the order from greatest to least effect starts with the three online product information characteristics (product information credibility, interactivity and visualization) followed by the two consumer cognition behaviors (perceived usefulness and fluency). In contrast, if only direct effects are considered, the order of effects on product information sharing is quite different with perceived usefulness appearing to be more important and perceived fluency not important.

Among the three online product information characteristics, product information interactivity and credibility have the strongest influence on each of the two intervening consumer cognition behaviors (perceived fluency and usefulness) and product information sharing. Product information visualization has its strongest influence on perceived usefulness; product information interactivity and credibility have strongest influence on perceived fluency.

New findings

Table 10 summarizes findings that have not been reported in previous studies.

Table 10 New findings

New findings
Direct effects on Product Information Sharing due to Product Information Visualization, Product Information Interactivity, Product Information Credibility are positive, medium, and significant.
The direct effect on Perceived Fluency due to Product Information Visualization; Product Information Sharing due to Perceived Fluency are not statistically significant.
The total of the indirect effects on Product Information Sharing due to Product Information Interactivity, Product Information Credibility are positive, small and significant.
Total effects on Product Information Sharing due to Product Information Visualization, Product Information Interactivity, Product Information Credibility, are positive, medium, and significant.

These new findings require validation in further studies. In particular, they highlight the important need for studies of causal effects to analyze and report indirect effects and total effects rather than only direct effects.

Practical implications of the findings

From total effects in Table 8, it is possible to develop a hierarchical set of practical actions that increase consumer's product information sharing. These are described in Table 11 with actions 1, 2 and 3 in decreasing order of their influence on consumer's product information sharing.

Table 11 Practical actions to increase consumer's product information sharing

Enterprise Action to Increase Consumer's Product Information Sharing	Online Product Information Characteristics	Comment
1. Ensure that information provided by the enterprise about products or services is: (a) suggestive; (b) instructive; (c) attribute; (d) believable; (e) an important stimulus can influence related consumer's cognition process.	Product Information Credibility	The actions in **1** are the best means for increasing the consumer's: (a) attention to the enterprise and its product information; (b) confidence in the commercial-oriented classifieds; (c) awareness of product to eliminate their doubts; (d) understanding about product features and attributes; (e) willing to make purchasing decision. Also, the actions in **2** contribute to achieving the same outcomes.
2. Ensure that the enterprise: (a) understands consumer needs and accurately answers consumer's purchasing questions; (b) increases consumer's perception about product knowledge and application; (c) can help consumer understand the potential features and advantages of the product; ;(d) conduct useful product information.	Product Information Interactivity	
3. Ensure that online information provided by the enterprise about products or services is: (a) attractive; (b) comprehensive and well organized; (c) guides influence consumer's perception about its product.	Product Information Visualization	The actions in **3** contribute to increasing the consumer's: (a) pleasure; (b) attention to the enterprise and its product information; (c) feeling of calmness, unrestricted freedom, and ability to access interested product information; (d) willing to make purchasing decision.

The comments in Table 11 indicate additional direct influences on other consumer cognition behaviors (perceived fluency and perceived usefulness) that act as mediators in the indirect effects of enterprise's online product information characteristics on consumer's product information sharing behavior.

Conclusion

This present paper has shown that in an online information environment the most important influential factor on a consumer's product information sharing is product information credibility (i.e., product information must: be reliable and accurate, believable, and increase consumer's cognitive efficiency). Second, is product information interactivity (i.e., the enterprise's ability to: understand and answer consumer's purchasing questions; conduct useful product information to increase consumer's understanding about product features and attributes). Third, is product information visualization (i.e., online product information must be: attractive; useful; comprehensive and well organized; guides consumer's perception about its product).

The online product information characteristics have indirect influence on consumer's product information sharing by increasing: perceived fluency (i.e., online product information must be: comprehensive, simplicity, flexibility and easy for the consumers); and perceived usefulness (i.e., online product information can: meet and enhance consumer's expectation value; reduce consumer's purchasing cost; and be easy for purchasing decision making). However, perceived fluency is not influenced significantly by product information visualization and it does not directly influence product information sharing, but is influenced mainly by product information interactivity and credibility.

The theoretical contributions of the study confirm that: (a) effects among these behaviors in the western societies are also evident in the context of Thailand; and (b) there are new theoretical findings as shown in Table 10. New findings require further validation but certainly highlight the advantages of analyzing indirect and total effects rather than only direct effects. The discussion of the findings includes practical implications, which are drawn out from the theoretical results.

However, there are certain limitations on the findings. The external validity must be confirmed by further studies. Young people formed a large part of the sample and consequently older individuals were outnumbered by younger participants. It is possible that other enterprise and consumer's information behaviors are relevant and should be included in the model. However, the findings are useful and certainly contribute to an increased understanding of the relationships between the characteristics of online product information and consumer's product information sharing behaviors in online environments in the context of Thailand.

References

Alter, A., Oppenheimer, D., Epley, N., & Eyre, R. (2007). Overcoming intuition: Metacognitive difficulty activates analytic reasoning. *Journal Of Experimental Psychology: General*, *136*(4), 569-576. https://doi.org/10.1037/0096-3445.136.4.569

Bederson, B., & Shneiderman, B. (2003). *The craft of information visualization* (1st ed.). Morgan Kaufmann Pub.

Belk, R. (1975). Situational Variables and Consumer Behavior. *Journal of Consumer Research*, *2*(3), 157. https://doi.org/10.1086/208627

Chaiken, S., & Maheswaran, D. (1994). Heuristic processing can bias systematic processing: effects of source credibility, argument ambiguity, and task importance on attitude judgment. *Journal of personality and social psychology, 66 3*, 460-73.

Claypool, H., Mackie, D., & Garcia-Marques, T. (2015). Fluency and Attitudes. *Social and Personality Psychology Compass*, *9*(7), 370-382. https://doi.org/10.1111/spc3.12179

Cohen, J., Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.)*. Mahwah, NJ, Erlbaum.

Cohen. J. (1988). *Statistical Power Analysis for the Behavioral Science (2nd, ed.)*. Hillsdale, NJ: Lawrence Earlbaum Associates

Conati, C., Carenini, G., Toker, D., & Lallé, S. (2015). Towards User-Adaptive Information Visualization. *AAAI*., 15, 4100-4106.

Cosenza, T.R., Solomon, M.R., & Kwon, W. (2015). Credibility in the blogosphere: A study of measurement and influence of wine blogs as an information source. *Journal of Consumer Behaviour, 14*, 71-91.

Daugherty, P., Ellinger, A., & Rogers, D. (1995). Information accessibility: customer responsiveness and enhanced performance. *International Journal of Physical Distribution & Logistics Management*, *25*(1), 4-17. https://doi.org/10.1108/09600039510080117

Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319. https://doi.org/10.2307/249008

Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319. https://doi.org/10.2307/249008

Deckert, M. (2015). Processing fluency and decision-making: The role of language structure. *Psychology of Language and Communication, 19*(2), 149–161. https://doi.org/10.1515/plc-2015-0009

Defleaur, M. (2017). *Mass communication Theories, Explaining Origins, Processes and Effects.* Pearson Education, Inc.

Deimen, I., Ketelaar, F., & Le Quement, M. (2015). Consistency and communication in committees. *Journal of Economic Theory*, *160*, 24-35. https://doi.org/10.1016/j.jet.2015.08.004

Fiore, A., Kim, J., & Lee, H. (2005). Effect of image interactivity technology on consumer responses toward the online retailer. *Journal Of Interactive Marketing*, *19*(3), 38-53. https://doi.org/10.1002/dir.20042

Harris, P., Sillence, E., & Briggs, P. (2011). Perceived Threat and Corroboration: Key Factors That Improve a Predictive Model of Trust in Internet-based Health Information and Advice. *Journal Of Medical Internet Research*, *13*(3), e51. https://doi.org/10.2196/jmir.1821

Hoffman, D., & Novak, T. (1996). Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations. *Journal of Marketing*, *60*(3), 50. https://doi.org/10.2307/1251841

Hsieh-Yee, I. (2001). Research on Web search behavior. *Library & Information Science Research*, *23*(2), 167-185. https://doi.org/10.1016/s0740-8188(01)00069-x

Kahn, B., Strong, D., & Wang, R. (2002). Information quality benchmarks: product and service performance. *Communications of the ACM*, *45*(4ve). https://doi.org/10.1145/505999.506007

Kline. R.B. (2016). *Principles and Practice of Structural Equation Modeling* (4th, ed.). New York: The Guilford Press.

Krifka, M. (2008). Basic notions of information structure. *Acta Linguistica Hungarica, 55*, 243-276.

Lee, H. L., & Whang, S. (2000). Information sharing in a supply chain. *International Journal of Technology Management*, V20, 3, 373-387.

Lee, H.L., Padmanabham, V., & Whang, S. (1997). The bullwhip effect in supply chains. *MITSloan Management Review,* Vol. 38(3), 93-102.

Liu, Y., & Shrum, L. J. (2002). What is interactivity and is it always such a good thing? Implications of definition, person, and situation for the influence of interactivity on advertising effectiveness. *Journal of Advertising, 31*(4), 53–64. https://doi.org/10.1080/00913367.2002.10673685

Mason-Jones, R., & Towill, D. (1997). Information enrichment: designing the supply chain for competitive advantage. *Supply Chain Management: An International Journal*, *2*(4), 137-148. https://doi.org/10.1108/13598549710191304

Mason-Jones, R., & Towill, D. (1998). Shrinking the supply chain uncertainty circle *IOM Control Magazine*, *24* (7)

Mathieson, K., Peacock, E., & Chin, W. (2001). Extending the technology acceptance model. *ACM SIGMIS Database: The DATABASE for Advances in Information Systems*, *32*(3), 86-112. https://doi.org/10.1145/506724.506730

McKnight, D.H., & Kacmar, C.J. (2006). Factors of Information Credibility for an Internet Advice Site. *Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06)*, *6*, 113b-113b.

McMillan, S., & Hwang, J. (2002). Measures of Perceived Interactivity: An Exploration of the Role of Direction of Communication, User Control, and Time in Shaping Perceptions of Interactivity. *Journal of Advertising*, *31*(3), 29-42. https://doi.org/10.1080/00913367.2002.10673674

Munzner, T. (2008). Process and Pitfalls in Writing Information Visualization Research Papers. *Information Visualization*.

Newhagen, J. (2004). Interactivity, Dynamic Symbol Processing, and the Emergence of Content in Human Communication. *The Information Society*, *20*(5), 395-400. https://doi.org/10.1080/01972240490508108

Paivio, A. (2007). *Mind and Its Evolution A Dual Coding Theoretical Approach* (1st ed.). Psychology Press.

Paul, R. (2005). The state of critical thinking today. *New Directions For Community Colleges*, *2005*(130), 27-38. https://doi.org/10.1002/cc.193

Pettigrew, K. (1999). Waiting for chiropody: contextual results from an ethnographic study of the information behaviour among attendees at community clinics. *Information Processing & Management*, *35*(6), 801-817. https://doi.org/10.1016/s0306-4573(99)00027-8

Pettigrew, K.E., & McKechnie, L. (2001). The use of theory in information science research. *J. Assoc. Inf. Sci. Technol.*, *52*, 62-73.

Petty, R., Cacioppo, J., & Schumann, D. (1983). Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement. *Journal Of Consumer Research*, *10*(2), 135. https://doi.org/10.1086/208954

Petty, R., Kasmer, J., Haugtvedt, C., & Cacioppo, J. (1987). Source and message factors in persuasion: A reply to stiff's critique of the elaboration likelihood model. *Communication Monographs*, *54*(3), 233-249. https://doi.org/10.1080/03637758709390229

Pujara, A., & Kant, R. (2015). Supply Chain Information Sharing. *International Journal of Information Systems and Supply Chain Management*, *8*(1), 22-38. https://doi.org/10.4018/ijisscm.2015010102

Rafaeli, S., & Ariel, Y. (2007). Assessing interactivity in computer-mediated research. In A. N. Joinson, K. Y. A. McKenna, T. Postmes, & U.-D. Reips (Eds.), *The Oxford handbook of Internet psychology* (pp. 71–89). Oxford, UK: Oxford University Press.

RAMAYAH, T., & OMAR, R. (2010). INFORMATION EXCHANGE AND SUPPLY CHAIN PERFORMANCE. *International Journal of Information Technology & Decision Making*, *09*(01), 35-52. https://doi.org/10.1142/s0219622010003658

Reinhard, M., Sporer, S., Scharmach, M., & Marksteiner, T. (2011). Listening, not watching: Situational familiarity and the ability to detect deception. *Journal Of Personality And Social Psychology*, *101*(3), 467-484. https://doi.org/10.1037/a0023726

Sadiku, M., Shadare, A., Musa, S., & Akujuobi, C. (2016). DATA VISUALIZATION. *International Journal of Engineering Research and Advanced Technology*, *02*(12), 11-16.

Shah, A. K., & Oppenheimer, D. M. (2007). Easy does it: The role of fluency in cue weighting. *Judgment and Decision Making*, *2*(6), 371–379.

Shah, A. K., & Oppenheimer, D. M. (2008). Heuristics made easy: An effort-reduction framework. *Psychological Bulletin*, *134*(2), 207–222. https://doi.org/10.1037/0033-2909.134.2.207

Shekelle, P., Morton, S.C., & Keeler, E.B. (2006). Costs and benefits of health information technology. *Evidence report/technology assessment*, *132*, 1-71.

Singh, J. (1996). The importance of information flow within the supply chain. *Logistics Information Management*, *9*(4), 28-30. https://doi.org/10.1108/09576059610123132

Straub, D., & Gefen, D. (2004). Validation Guidelines for IS Positivist Research. *Communications of The Association for Information Systems*, *13*. https://doi.org/10.17705/1cais.01324

Sun, S., & Yen, J. (2005). Information supply chain: A unified framework for information-sharing. *Lecture Notes in Computer Science*, *3495*, 422-428. https://doi.org/10.1007/11427995_38

Taylor, R. (1991). Information Use Environments. *Communication Sciences*, 10 (217), 55.

Thomas, J., & Cook, K. (2006). A visual analytics agenda. *IEEE Computer Graphics and Applications*, *26*(1), 10-13. https://doi.org/10.1109/mcg.2006.5

Venkatesh, Morris, Davis, & Davis. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, *27*(3), 425. https://doi.org/10.2307/30036540

Venkatesh, Thong, & Xu. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, *36*(1), 157. https://doi.org/10.2307/41410412

Vieira, S. (2014). *The truths and myths of information authority*. SAGE.

Yadav, M., & Varadarajan, R. (2005). Interactivity in the Electronic Marketplace: An Exposition of the Concept and Implications for Research. *Journal Of The Academy Of Marketing Science*, *33*(4), 585-603. https://doi.org/10.1177/0092070305278487

Zhang Xiangxian, Liu Hongyu, & Hu Yi. (2014). Formation Mechanism of Social Network Information Ecosystem and Empirical Study on Influencing Factors. *Library and Information Service*, (116): 36-41. https://doi.org/10.13266/j

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

A STUDY OF FACTORS INFLUENCING ONLINE PURCHASE INTENTION TOWARDS A POPULAR ONLINE APPAREL RETAILER IN THAILAND

Nay Chi Khin Khin Oo[1], Sirisuhk Rakthin[2] and Prattana Punnakitikashem[3]
[1,2,3]College of Management,Mahidol University,
69 Vibhawadi Rangsit Rd., Samsennai, Phayathai, Bangkok 10400, Thailand
[3]prattana.pun@mahidol.ac.th

Abstract

Ecommerce apparel retails are booming all around the world in the 21st century. Unlike the old days, e-commerce allows humanity to be more convenient to shop since procurements and transactions can be quickly conducted through the internet anywhere. However, some shoppers are still reluctant to buy apparel and fashion products online. Thus, seeing only the product's features on the screen is not enough to decide to buy. This research aims to study the influence of factors such as fashion leadership, website attitude, need advice from personnel, shopping for fun, and quick shopping on the online clothing purchase intention of female consumers. Researchers employed a multiple regression model to conduct the research analyses, and 300 valid samples were collected from the adult female respondents who have experience with a popular apparel retail website. The analysis results showed the significant impacts of fashion leadership, website attitude, and the need for personnel's advice on the online clothing purchase intention. Apart from the main hypotheses, the researchers also found the online clothing purchase intention varies in different income levels. Thereby, the study helps online fashion apparel and clothing retailers obtain a better insight into the role of fashion leadership, website attitude, and shoppers' need for advice from store personnel in developing consumers' purchase intention.

Keywords: Fashion leadership, Hedonic shopping, Need advice from personnel, Online clothing purchase intention, Quick shopping, Website attitude

Introduction

Ecommerce businesses become popular worldwide nowadays due to the unexpected Covid-19 crisis. Unlike the old days, e-commerce allows humanity to be more convenient to shop since procurements and transactions can be quickly conducted through the internet anywhere (Hidayat, 2008). Shopping at the brick and motor stores is not as easy and safe as before. As lockdowns are a part of new normal amid of pandemic, businesses and consumers go digital to adapt the situation. Therefore, business owners need to be attentive to factors affecting the online purchase intention of customers now more than ever.

Thailand has always been famous as a shopper’s paradise. In the present day, almost all of the apparel brands could be purchased through e-commerce platform in Thailand. However, some shoppers, especially female shoppers, are still reluctant to buy apparel and fashion products online due to the lack of physical contact. Clothing is an experience good; thus, seeing only the product's features on the screen is not enough to decide for buying (Peterson, Balasubramanian, & Bronnenberg, 1997). The clothing purchase decision could vary based on size, quality, price, personal preferences, etc. This motivates the researchers to investigate what influences online clothing purchase intention.

Cho and Workman (2011) stated that the shopping styles of males and females are often different. In general, women are the ones who make 80% of all purchase decisions (Cleaver, 2004). Many research studies showed that the female shoppers tend to shop for fun, browse thoroughly to collect information of what they want, possess more mental energy to research different options, and purchase more apparel when compared to male shoppers (Cleaver, 2004; Falk & Campbell, 1997; Hansen & Jensen, 2009). Therefore, studying what factors affecting the online purchase intention of female consumers in the context of apparel retail in Thailand draws great attention to the researchers.

In this paper, we aim to study the influence of the factors such as fashion leadership, website attitude, need advice from personnel, shopping for fun, and quick shopping on the online clothing purchase intention of female consumers in the context of Bangkok, Thailand. Apart from our main objectives, we also investigated if the purchase intention of females varies in different age groups and income levels. The finding from our study would assist online clothing retail managers in developing strategies to attract and maintain female consumers who shop clothing online.

We organized this paper into six sections: introduction, literature review and hypothesis development, research methodology, results, discussion and conclusion, and references.

Literature review and hypothesis development

Online clothing purchase intention

Online purchase intention is originated from conventional purchase intention (Close & Kukar-Kinney, 2010). Close and Kukar-Kinney (2010) explained online purchase intention as the willingness of online buyers to make purchase of goods and services through the internet or e-commerce platform. Similar to the previous researchers, Meskaran et al. (2013) also defined online purchase intention as the intention of customers to purchase products via the internet. According to Iqbal et al. (2012), online purchase intention is the readiness of customers to utilize internet service, make actual purchases of goods or services, or assess different product or service prices. This study focuses on the clothing purchase intention from e-commerce clothing retails. Thus, online clothing purchase intention in this study was defined as the online shoppers' intention or willingness to buy apparel via ecommerce platforms.

Fashion leadership and online clothing purchase intention

Martinez and Kim (2012) defined fashion leadership behavior as the combination of the tendency to buy up-to-date new fashion sooner than other consumers, fashion innovativeness (Sproles, 1979), and the ability to influence the successive purchaser by conveying information about new fashion, fashion opinion leadership (Workman & Johnson, 1993). Many past studies have supported fashion leadership behavior influences online apparel purchase intention. For instance, the study of Escobar-Rodríguez and Bonsón-Fernández (2017) pointed out fashion innovativeness has a positive effect on online purchase intention. Baker et al. (2019) also found that fashion opinion leadership increases internet usage for clothing shopping. Moreover, Shang et al. (2005) claimed that fashion involvement motivates consumers to shop online. Thus, we expected the female consumers' fashion leadership behavior to positively affect their online clothing purchase intention. We hypothesized our first hypothesis as follows.

H1: Online clothing purchase intention (PI) is positively influenced by fashion leadership (FL).

Website attitude and online purchase intention

Website attitude in this study refers to the consumers' evaluation or attitude toward the characteristics of the website (Martinez & Kim, 2012). In other words, website attitude is the perceived website quality of a particular website. Huang (2003) argued that users' decision-making at a website is ultimately influenced by the user's experience and evaluations of the website's characteristics. Previous researchers proposed website attitude influences the user's trust, which affects the online purchase intention (Chang & Chen, 2008). The website attitude was also suggested as a factor that increases shoppers' online purchase intention in the study of Martinez and Kim (2012). Furthermore, Lynch et al. (2001) claimed that website attitude is imperative for high-touch product retailers, including apparel retailers. Thereby, we supposed that shoppers' positive perceived website quality might increase the online clothing purchase intention. And we developed the second hypothesis.

H2: Online clothing purchase intention (PI) is positively influenced by positive website attitude (WA).

Need advice from personnel and online purchase intention

Some apparel shoppers, especially female shoppers, need reassurance or guidance when buying clothing. Mostly, female shoppers tend to doubt their ability to choose suitable clothing for themselves (Hansen & Jensen, 2009). Many previous research studies have found that different clothing shoppers require different advice from store personnel (Moye & Kincade, 2003; Shim & Kotsiopulos, 1993). Shoppers who prefer to get guidance from other persons are expected to have less intention to shop from an e-commerce platform. Hansen and Jensen (2009) proposed that needing advice from personnel negatively affects online clothing purchase intention. However, they could not find the significant relationship of the two variables. We developed the following hypothesis in accordance to this literature.

H3: Online clothing purchase intention (PI) is positively influenced by need advice from personnel (NAP).

Shopping for fun and online purchase intention

Shopping for fun was defined as the shopper's orientation that perceives the shopping experience more enjoyable than others (Scarpi et al., 2014). Shoppers oriented to hedonic shopping tend to consider shopping as a recreational, fun, and pleasurable activity (Jin & Sternquist, 2004). Many researchers argued that shopping online is less enjoyable than offline shopping (Dennis & Sandhu, 2002). Therefore, clothing shoppers who like to shop for fun might have less online purchase intention (Hansen & Jensen, 2009). However, the technology in the present days is more developed and novel than that of the past few years. The e-commerce retailers become more attentive to the users' enjoyment and make their platform more enjoyable (Lu & Su, 2009). Moreover, recent studies confirmed that the hedonic attributes of shoppers have a positive effect on online purchases (Chiou & Ting, 2011; Comrey & Lee, 1992; Moon et al., 2017; Moon et al., 2015). Thereby, we developed the following hypothesis.

H4: Online clothing purchase intention (PI) is positively influenced by shopping for fun (SF).

Quick shopping and online purchase intention

Quick shopping was explained as time-saving shopping in the study of Hansen and Jensen (2009). Shoppers with time-saving orientation tend to complete the shopping trip in the minimum amount of time (Hansen & Jensen, 2009). Due to modern-day technology development, shoppers can easily access online retail websites and do the transaction (Hidayat, 2008), from their portable electronic devices. Thereby, shopping online could save a lot of time than offline shopping. Hansen and Jensen (2009) proposed that time-saving-oriented shopping and quick shopping positively affect online clothing purchases. The findings of Kim and Kim (2004) also suggested that many consumers agree that shopping online saves more time than shopping offline. Hence, quick shopping was expected to impact online clothing buying intention positively, and we developed the following hypothesis.

H5: Online clothing purchase intention (PI) is positively influenced by quick shopping (QS).

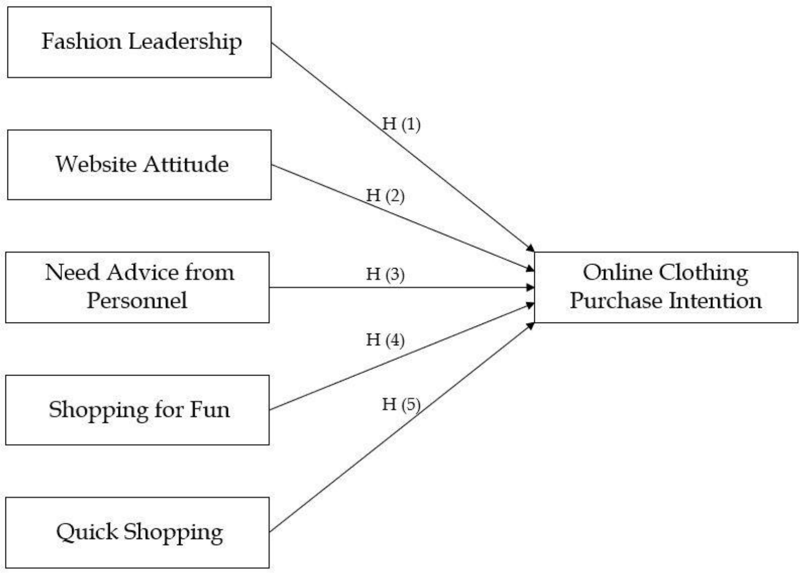

Figure 1 Conceptual framework of the study

Research methodology

This paper is a quantitative research study using the self-administered survey method. The study aims to investigate the influence factors of online clothing purchase intention in the context of female customers in Bangkok, Thailand. To fulfill this aim, we chose XYZ (pseudonym) apparel brand, one of Thailand's most popular fashion apparel websites, to conduct the study. According to Statista (2021), the XYZ website obtains over 670,000 views monthly and the most visited fashion website in Thailand. The targeted population of this study is the adult female consumers (18 years old and above) from Bangkok who have experience with the XYZ clothing retail website and have purchased the clothing from the website. We employed non-probability sampling methods, such as purposive and convenient sampling.

After reviewing the literature comprehensively, the questionnaire was developed by adapting the questionnaire items from the previous studies of Hansen and Jensen (2009) and Martinez and Kim (2012). The questionnaire was translated to Thai and collected in Thai and English since the respondents were from Bangkok, Thailand. All variables were measured in five-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree. The questionnaire includes 29 items organized into eight sections: screening section (1-item), fashion leadership (8-items), website attitude (6-items), need advice from personnel (3-items), shopping for fun (3-items), quick shopping (3-items), online clothing purchase intention (3-items) and demographic profiles (2-items). The detailed questionnaire can be seen in the appendix.

According to Sekaran and Bougie (2010), the sample sizes between 30 and 500 can be considered proper for most research. Thus, we decided to collect at least 300 data. The samples were collected from 10 random sky train stations (BTS) located in Bangkok's central business districts, where the areas are most crowded. The self-administered survey questionnaires were distributed to the women passed by the BTS stations and female pedestrians. First, the researchers asked the screening question, then requested them to participate. The total number of 313 questionnaires were distributed by asking the respondents to scan the QR code connected to the online questionnaire. However, some of the respondents turned out to answer that they have no experience with the XYZ online store in the questionnaire. Thus, we had to remove the answers from those respondents, and only 300 valid samples were left.

For the statistical method, we used multiple regression in SPSS software to test the relationships of the variables and hypotheses. Apart from the main hypotheses, we also analyzed the variance test (ANOVA) to investigate the difference in mean values of online clothing purchase intention when segmented by different age groups and income levels. Before conducting the actual research, we distributed the questionnaire to 30 respondents for the pre-test.

Results

Among the respondents, 47.3% were from the age group of 26-35 years, 31.3% from 18-25years, and the rest from 36 and above. The majority of respondents, which was 33.3%, earn 20,001-30,000 bahts. Another 26.7% have an income level of 30,001 bahts and above. The rest 22% and 18% earn 10,001-20,000 bahts and 10,000 bahts and less respectively (see Table 1).

Table 1 Descriptive statistics

Items	Frequency	Percentage
Respondent's Age		
18-25 years	94	31.3%
26-35 years	142	47.3%
36 years and above	64	21.4%
Respondent's Income		
10,000 bahts and below	54	18%
10,001 – 20,000 bahts	66	22%
20,001 – 30,000 bahts	100	33.3%
30,001 bahts and above	80	26.7%

Reliability test

The internal consistency of measured items was evaluated by Cronbach's alpha coefficient values of each variable. The Cronbach's Alpha values of all variables are in the range of 0.712 to 0.953, which exceed the critical value of 0.7 as recommended by Field (2005). On the other terms, the measured items are reliable and possess high internal consistency. The results were shown in Table 2.

Table 2 Cronbach's Alpha test results

Variables (No. of Items)	Cronbach's Alpha
Fashion Leadership (8)	0.953
Website Attitude (6)	0.877
Need Advice from Personnel (3)	0.806
Shopping for Fun (3)	0.712
Quick Shopping (3)	0.875
Online Clothing Purchase Intention (3)	0.818

Hypothesis testing

For the hypothesis testing, a multiple regression model was used. The overall model was significant (F = 89.682, $p < 0.001$), which means that at least one out of five independent variables in the model has a significant relationship with the dependent variable. The adjusted R^2 value of 0.597 showed that the model could explain 59.7% variation in online clothing purchase intention. Moreover, the independent variables' variance inflation factors (VIF) ranged from 1.243 to 2.063. Therefore, multi-collinearity was not an issue in this study. The results from the regression analysis were shown in Table 2.

Table 3 Regression analysis results

Variables	Standardized Beta Coefficients	Variance Inflation Factor (VIF)
Fashion Leadership (FL)	0.369^{**}	2.063
Website Attitude (WA)	0.408^{**}	1.453
Need Advice from Personnel (NP)	-0.140^{**}	1.243
Shopping for Fun (SF)	0.057	1.510
Quick Shopping (QS)	0.020	1.834
R^2	0.604	
Adjusted R^2	0.597	
ANOVA-F	89.682^{**}	

* = *p < 0.05, significant at 95% confident level,*
** = *p < 0.001, significant at 99% confident level*

The regression results showed that fashion leadership ($\beta = 0.369$, $p < 0.05$) and website attitude ($\beta = 0.408$, $p < 0.05$) have significant positive effects on female shoppers' online clothing purchase intention. Thus, hypotheses 1 and 2 were supported. Needing advice from personnel has a significant negative impact on online purchase intention as the beta coefficient was -0.140 and the p-value was less than 0.05. Therefore, hypothesis 3 was also supported. However, the results of shopping for fun ($\beta = 0.057$, $p > 0.05$) and quick shopping ($\beta = 0.020$, $p > 0.05$) were not significant. Hypotheses 4 and 5 were inconclusive due to these findings.

Besides the main hypothesis testing, one-way ANOVA was used to analyze if female consumers' online clothing purchase intention varies in different age groups and income levels. The F statistics of online clothing purchase intention in different age groups was not significant as the p-value (0.651) was greater than 0.05. In contrast, the different income levels showed a significant variation as the p-value (0.03) was less than 0.05. Thereby, we conducted the Bonferroni post hoc test to identify which income level has significantly varied online purchase intention. According to the post hoc test results, the respondents from the income level of 10,000 bahts and below tend to have significantly less online clothing purchase intentions when compared to those from the other three income levels.

Discussions and conclusions

The summary of hypothesis testing results are shown in Table 4. Our analyses showed that fashion leadership has a significant positive impact on online clothing purchase intention. This finding is in line with the discoveries of Escobar-Rodríguez and Bonsón-Fernández (2017); Martinez and Kim (2012) and Baker et al. (2019). Following this result, we would like to suggest that to promote the online purchase intention, the online retailers should provide a social community, such as blogging page and social media groups, for the customers where they can share up-to-date information about fashion and influence others.

This study also found that shoppers' positive attitude towards the website promotes online clothing purchase intention. This finding is in line with Huang's (2003) and Martinez and Kim (2012) findings. We also concluded that out of five predictors, the consumers' positive attitude towards the website quality has the highest impact ($\beta = 0.408$) on apparel purchase intention via the internet. Thus, to evoke the purchase intention of online shoppers, the retailers should be attentive to improve and maintain the quality and user-friendliness of their websites consistently.

Contrary to the insignificant findings of Hansen and Jensen (2009), we found the significant result that female consumers who require advice from store personnel possess less purchase intention to buy apparel online as we expected. Employing Artificial Intelligent (AI) technology on the e-commerce platform to assist the apparel shoppers would help reduce the negative effect of shoppers' need for advice from store personnel. For example, providing a virtual shopping assistant to whom customers can ask for information, such as apparel compatibility with hair or skin color and advice for apparel size, may help shoppers choose suitable clothing. Moreover, shoppers will feel less reluctant to ask for advice from AI than actual human personnel, thereby promoting the shopper's buying intention online.

Hypothesis 4, online clothing purchase intention is positively influenced by shopping for fun, and hypothesis 5, online clothing purchase intention is positively influenced by quick shopping, were not supported. There was unsubstantiated evidence for the positive effects of shopper's hedonic shopping and time-saving orientations on purchase intention in this study. These results were also in line with the previous study of Hansen and Jensen (2009). The study also found that the online purchase intention of female consumers varies in different income levels. The shoppers with low income (10,000 bahts and below) tend to have the slightest willingness to purchase apparel.

Table 4 Summary of hypothesis testing

Hypotheses	Results
H1: Fashion leadership → (+) Online clothing purchase intention	Supported
H2: Website attitude → (+) Online clothing purchase intention	Supported
H3: Need advice from personnel → (-) Online clothing purchase intention	Supported
H4: Shopping for fun → (+) Online clothing purchase intention	Not supported
H5: Quick shopping → (+) Online clothing purchase intention	Not supported

Research implications

This study contributes to the literature by specifically focus on the online clothing purchase intention of female customers. The aspects of the current research findings broaden the understanding of online purchase intention of females in the context of clothing and how their shopping orientations, such as fashion leadership, website attitude, and need advice from personnel, would influence the intention. Moreover, this study reconfirms the previous finding and validates several scholars' propositions (Huang, 2003; Hansen & Jensen, 2009; Martinez and Kim 2012).

In terms of managerial contribution, the study helps online fashion apparel and clothing retailers understand better the role of fashion leadership, website attitude, and shoppers' need for advice from store personnel in developing consumers' purchase intention. It would also assist online clothing retail managers in developing strategies to attract and maintain female consumers who shop online.

Limitation and future study

However, there are several limitations in this study. The study was conducted only in the Bangkok central business district areas. Thus, it may limit the generalizability of the entire population. Moreover, this study only focuses on female customers of XYZ online apparel retailers. The application of convenient sampling may cause biased sample. The findings might not be consistent for other gender and online retailers of different natures. Bigger sample size is recommended for future investigation. We would like to suggest for considering more demographic factors other than age and income level in the future study. Additionally, different independent variables, such as perceived risk, brand awareness, etc., might have different influences on the online purchase intention of female consumers. We also suggest exploring other predictors for further investigations.

References

Baker, R., Yu, U.-J., Gam, H. J., & Banning, J. (2019). Identifying tween fashion consumers' profile concerning fashion innovativeness, opinion leadership, internet use for apparel shopping, interest in online co-design involvement, and brand commitment. *Fashion and Textiles*, *6*(1), 1-17.

Chang, H. H., & Chen, S. W. (2008). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online information review*.

Chiou, J.-S., & Ting, C.-C. (2011). Will you spend more money and time on internet shopping when the product and situation are right? *Computers in Human Behavior*, *27*(1), 203-208.

Cho, S., & Workman, J. (2011). Gender, fashion innovativeness and opinion leadership, and need for touch. *Journal of Fashion Marketing and Management: An International Journal*.

Cleaver, J. (2004). What women want: the growing economic power of women consumers is transforming today's marketplace. *Entrepreneur, available at: http://findarticles. com*.

Close, A. G., & Kukar-Kinney, M. (2010). Beyond buying: Motivations behind consumers' online shopping cart use. *Journal of Business Research*, *63*(9-10), 986-992.

Comrey, A. L., & Lee, H. B. (1992). A First Course in Factor Analysis, 2nd Edn. Hillsdale, NJ: L. In: Erlbaum Associates.

Dennis, C., & Sandhu, B. (2002). From bricks to clicks: understanding the e-consumer. *Qualitative Market Research: An International Journal*.

Escobar-Rodríguez, T., & Bonsón-Fernández, R. (2017). Analysing online purchase intention in Spain: fashion e-commerce. *Information Systems and e-Business Management*, *15*(3), 599-622.

Falk, P., & Campbell, C. (1997). *The shopping experience*. Sage.

Field, A. (2005). Discovering Statistics Using SPSS (Introducing Statistical Methods) Sage Publications. In: London.

Hansen, T., & Jensen, J. M. (2009). Shopping orientation and online clothing purchases: the role of gender and purchase situation. *European Journal of Marketing*.

Hidayat, T. (2008). *Panduan Membuat Toko Online dengan OSCommerce*. MediaKita.

Huang, M.-H. (2003). Designing website attributes to induce experiential encounters. *Computers in Human Behavior*, *19*(4), 425-442.

Iqbal, S., Hunjra, A. I., & Rehman, K. U. (2012). Consumer intention to shop online: B2C E-commerce in developing countries. *Middle-East Journal of Scientific Research*, *12*(4), 424-432.

Jin, B., & Sternquist, B. (2004). Shopping is truly a joy. *The Service Industries Journal*, *24*(6), 1-18.

Kim, E. Y., & Kim, Y. K. (2004). Predicting online purchase intentions for clothing products. *European Journal of Marketing*.

Lu, H. P., & Su, P. Y. J. (2009). Factors affecting purchase intention on mobile shopping web sites. *Internet Research*.

Lynch, P. D., Kent, R. J., & Srinivasan, S. S. (2001). The global internet shopper: evidence from shopping tasks in twelve countries. *Journal of advertising research*, *41*(3), 15-23.

Martinez, B., & Kim, S. (2012). Predicting purchase intention for private sale sites. *Journal of Fashion Marketing and Management: An International Journal*.

Meskaran, F., Ismail, Z., & Shanmugam, B. (2013). Online purchase intention: Effects of trust and security perception. *Australian journal of basic and applied sciences*, *7*(6), 307-315.

Moon, M., Khalid, M., Awan, H., Attiq, S., Rasool, H., & Kiran, M. (2017). Consumer's perceptions of website's utilitarian and hedonic attributes and online purchase intentions: A cognitive–affective attitude approach. *Spanish Journal of Marketing-ESIC*, *21*(2), 73-88.

Moon, M. A., Pakistan, P. S. S. I., Rasool, H., Pakistan, P., & Attiq, S. (2015). P ersonality and irregular buying behavior: Adaptation and validation of core self-evaluation personality trait model in consumer impulsive and compulsive buying behavior. *Journal of Marketing and Consumer Research*, *15*.

Moye, L. N., & Kincade, D. H. (2003). Shopping orientation segments: exploring differences in store patronage and attitudes toward retail store environments among female apparel consumers. *International journal of consumer studies*, *27*(1), 58-71.

Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. (1997). Exploring the implications of the Internet for consumer marketing. *Journal of the Academy of Marketing science*, *25*(4), 329-346.

Scarpi, D., Pizzi, G., & Visentin, M. (2014). Shopping for fun or shopping to buy: is it different online and offline? *Journal of Retailing and Consumer Services*, *21*(3), 258-267.

Sekaran, U., & Bougie, R. (2010). Research methods for business: a skill building approach. *Language*, *20*(468p), 25cm.

Shang, R.-A., Chen, Y.-C., & Shen, L. (2005). Extrinsic versus intrinsic motivations for consumers to shop on-line. *Information & Management*, *42*(3), 401-413.

Shim, S., & Kotsiopulos, A. (1993). A typology of apparel shopping orientation segments among female consumers. *Clothing and textiles research journal*, *12*(1), 73-85.

Sproles, G. B. (1979). *Fashion: Consumer behavior toward dress*. Burgess Publishing Company.

Statista. (2021). *Most popular B2C e-commerce sites for fashion in Thailand as of 2nd quarter 2020, by monthly web visits*. https://www.statista.com/statistics/1007040/thailand-leading-b2c-ecommerce-sites-fashion/

Workman, J. E., & Johnson, K. K. (1993). Fashion opinion leadership, fashion innovativeness, and need for variety. *Clothing and textiles research journal*, *11*(3), 60-64.

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

HUMAN RESOURCE DEVELOPMENT AND CONSULTANTS' PERFORMANCE: AN EMPIRICAL STUDY IN VIETNAM

Hoang Anh Duy[1] and Nguyen Minh Tam[2]
[1,2]Foreign Trade University
91 Chua Lang Street, Dong Da District, Hanoi, Vietnam
[1]duyha@ftu.edu.vn, [2]nguyenminhtam2909@gmail.com

Abstract

Human resource is a very important capital in each organization, which need nurturing and developing. Especially, consulting firms, who are providing professional services, are likely to depend most on the strength of human resource because they are mainly labor intensive and their reputation is built by their human resource's performance. Developing human resources and tracking their performance are one of the first priority objectives in any service companies in general and consulting firms in particular. This paper examines the influence of human resource development on consultants' performance in consultancies in Vietnam. The five dimensions tested are: Organizational development, Career development, Individual development, Performance management, and Rewarding policies, which are supposed to positively impact consultants' performance. Quantitative methods and SPSS 20 were applied to analyze data based on the procedure of Reliability Test, Explanatory Factor Analysis (EFA), Correlation Coefficient and Regression Model. Results suggest that consulting firms should pay more attention on three main factors: individual development, career development and promotion policies to enhance consultants' performance.

Key words: Human Resource Development, consultants' performance, consulting firms

Introduction

Organizations, regardless they are private or public companies, for-profit or non-profit organizations, must operate among and in cooperation with people. Especially, consulting firms, who are providing professional services, are likely to depend most on the strength of human resource because they are mainly labor intensiveness and their reputation is built by their professional consultants' performance. Developing human resources, therefore, must be the first-priority objectives in any service companies in general and consulting firms in particular.

On the other hand, even though Human Resource Development (HRD) is a popular topic to research, little attention was paid on determining specific factors within this concept possibly affect consultants' performance, especially in Vietnam. These researches normally discussed a larger scope of human resource management (HRM) rather than specified HRD or performance management process (Richter et al., 2008). In Vietnam, consulting firms has developed for recent years, along with the development of big corporates who need professional advisory services. However, very little of researches have been done on the issue of employees' assessment in consulting firms. Therefore, the authors implemented the research on responses of consultants who currently working in consultancies, both of international firms who have branches in Vietnam and Vietnamese firms. The aim of this research is to examine the influence of human resource development on consultants' performance in consulting firms in Vietnam. Based on the results achieved, the research discusses the appropriateness and applicability of the results at consultancies in Vietnam.

Literature reviews

Human resource development

Human resource development (HRD) is the process of optimizing the production and utilization of the workforce and it is concerned with staffing issues, education and training, performance management, working conditions (Noe et al., 2016). HRD is to train and develop individuals, career, and organization. The shortage of well-trained employees limits the development of general economy, then, the most strategists agree that HRD is important in any companies. Formal training programs are an effective way of directly transferring the organizational goals and values to a whole group of people simultaneously (Shen & Roger, 2006).

HRD has three main functions as follows: *(1) Organizational development:* Organizational development emphasizes both macro and micro-organizational changes: macro changes are intended to ultimately improve the effectiveness of the organization as a whole, whereas micro changes are directed at individuals, small groups, and teams (Jon & Randy, 2012). *(2) Career development:* Career development is a general term used to describe a number of activities aimed at enhancing both individual and organizational performance, it benefits both of employee and organization. Career development involves two distinct processes: career planning and career management. Organizations should assist employees in career planning so the needs of both parties can be satisfied (Wayne & Joseph, 2016). *(3) Individual development (or training and development),* (Raymond, 2010) indicated that development is future oriented, meanwhile, training traditionally focuses on helping employees improve performance of their current jobs.

Almost human resource management specialists normally consider HRD and performance appraisal as two separate parts in human resource management process. However, Jain and Gautam (2014) approved a different idea that performance appraisal is a sub-system of HRD. These processes continue in a cause-and-effect relationship as output of HRD, reflecting by employees' performance, is the input of appraisal process. According to Robbins et al. (2020), performance appraisal refers to the process of evaluating work performance of employees to make personnel decisions. Based on performance assessment process, HR executives can evaluate effectiveness of development program and determine any weakness point for further improvement. Therefore, in this article, authors consider HRD and performance appraisal as a continuous and consistent process, which should be implemented simultaneously.

Employees' performance appraisal

Hundreds of theories about performance appraisal been published, but implementation in practice may be so far different. This topic was discussed on different industries but only a few researches focused on a specific field like consulting. For example, Tahiri et al. (2020) studied Human Resource Management, Performance Management and Employee Performance Appraisal of enterprises in different fields. Besides, these researches normally discussed a larger scope of HRM rather than specified performance appraisal process such as Richter et al. (2008), Kadam (2012), Thuy and Trinh (2021) analyzed the general policies of human resource management and performance appraisal in general. In Vietnam, consulting firms has developed for recent years, along with the development of big corporates who need professional advisory services. Therefore, very little of researches has been done on the issue of employees' assessment in consulting firms. Consultants are expected to have professional knowledge and master skills in some aspect therefore they must have been well-trained by special development program. Employees' performance improves from low to high after implementing organizational development interventions programs, the workers were more willing to be challenged and more eager to do their work (Phiphadkusolkul, 2012). About career development and consultants' performance, McGraw (2014) states that the effective implementation of employee career development processes significantly enriching employee's competency and improve their performance. About individual development system and consultants' performance, Sung and Choi (2014) argued that corporate investment in the training, education and organizational learning have potential to enhance the innovative performance. About performance appraisal system and employees' performance, employees those feel that the results of performance appraisal are unfair they often leave the organization and their morale and involvement will let down. There is a significant relationship exist between performance appraisal and employees' performance (Iqbal et al., 2013). About rewarding system and employees' performance, Barber and Bretz (2000) mentioned that reward management systems have major impact on organizations capability to catch, retain and motivate high potential employees and as a result getting the high levels of performance. However, those studies did not have a consulting firm and consultants involve in their researches.

HRD and performance appraisal in consulting firms

Consultants' development is a continuous experience-driven leaning process and the development needs for senior consultants, project leaders and partners should not in underestimated (Domsch, 2006). As normal career structure described in consultancies, it usually takes 6-12 years to reach the level of partner. The career path is clear and straight forward with stages. Consultants who have excellent performance can be allowed to skip one or some stages. Fast career progression positively motivates consultants and creates a dynamic and competitive working environment. In order to reach the partner level, any consultant need a long time of gaining experience and hard development. Organizations may support employee development through a variety of formal educational programs, either at the workplace or off-site. Another way to provide for employee development is assessment, collecting information and providing feedback to employees about their behavior, communication style, or skills (Dressler, 2020). Most employee development occurs through job experiences, the combination of relationships, problems, demands, tasks, and other features of an employee's jobs. Interpersonal relationships such as mentoring and coaching not only enrich relationships among colleagues, between seniors and juniors, etc. but also help shorten time for development by quickly learn personal knowledge from experienced others.

Research methodology

Research hypotheses and model

The authors suggested relationships between each independent factor and consultants' performance based on the previous researches, then proposing hypothesis.

Employees job performance improves from low to high after implementing organizational development interventions programs, the workers were more willing to be challenged and more eager to do their work. This is part of increasing the level of employee job performance, (Phiphadkusolkul, 2012). Organizational development strives to improve the performance of individuals, groups, and the overall organization (Robbins et al., 2020). Based on those discussion, the first hypothesis can be derived as follows:

H1: Organizational development has a positive influence on consultants' performance.

The effective implementation of employee career development processes significantly enriching employee's competency and improve their performance (McGraw, 2014). Career development affects employee performance through counseling and supports employees and helps them to develop their approach and solving problems (Kakui & Gachunga, 2016). In short, career development has close relationship with consultant's performance. The second hypothesis can be derived as follows:

H2: Career development has a positive influence on consultants' performance.

Training and development refer to an integrated set of planned programs are designed by the organization provided over some time, to help assure that all individuals have the necessary competencies to perform their fullest potential in support of the organization's goals (Jacobs & Washington, 2003). Sung and Choice (2014) argued that corporate investment in the training, education and organizational learning have potential to enhance the innovative performance. Consultancies therefore need to nurture their human capital strength by training and development programs.

H3: Individual development have a positive influence on consultants' performance.

Procedural justice perceptions include the fair relative weighting in the basic elements of the performance appraisal system (Robbins & Judges, 2019). Employees those feel that the results of performance appraisal are unfair they often leave the organization and their morale and involvement will let down. There is a significant relationship exist between performance appraisal and employees' performance (Iqbal et al., 2013).

H4: Fair and clear performance appraisal system positively influence consultants' performance.

Reward management system is a core function of human resource discipline and is a strategic partner with company management. Reward management systems have major impact on organizations capability to catch, retain and motivate high potential employees and as a result getting the high levels of performance (Barber & Bretz, 2000). Reward system include both of financial and non-financial rewards. Financial rewards are salary increase, bonus, etc. Meanwhile, non-financial rewards are promotion and title, authority and responsibility, education, appreciation and praise, etc. (Noe et al., 2016).

H5: Reward and promotion system has a positive influence on consultants' performance.

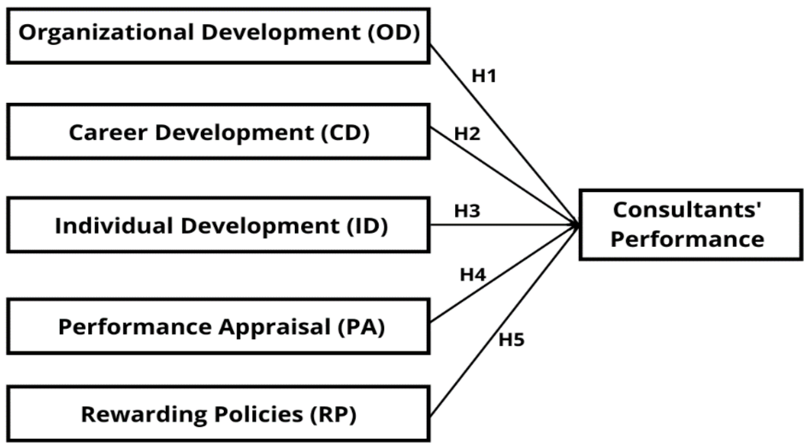

Figure 1 Research Model
Source: Conducted by authors, 2020

Research methods

This research applies theory-then-research strategy, which means the authors formulated a hypothesis from theories, then use collected data to test them. This includes developing a theoretical model for testing, creating a number of hypotheses that reflect relationships between its components, design research measures to investigate the model, testing the hypotheses using the collected data, and purifying the model and its associated theories.

Table 1 Variables and measurements

Variables	Measurements	Source
Organizational Development	OD1, OD2, OD3, OD4, OD5	Phiphadkusolkul (2012)
Career Development	CD1, CD2, CD3, CD4, CD5	McGraw (2014)
Individual development	ID1, ID2, ID3, ID4, ID5	Sung & Choi (2014)
Rewarding policies	RP1, RP2, RP3, RP4, RP5	Barber & Bretz (2000)
Performance appraisal	PA1, PA2, PA3, PA4	Iqbal, et al. (2013)
Consultants' performance	CP1, CP2, CP3, CP4, CP5	Domsch (2006)

Source: Conducted by authors, 2020

In order to evaluate the influence of HRD on consultants' performance, the questionnaire used for this study is built based on the authors' assumptions above. The questionnaire consists of two main parts. The first part is to exploit the background information of respondents to have fundamental understanding about who are they and their general satisfaction with jobs at Deloitte Vietnam. The second one collects data for modeling purpose. This is the space to get individuals' insight on the importance of each determinant. Questions are developed by clarifying each determinant from previous researches of Phiphadkusolkul (2012), McGraw (2014), Kakui & Gachunga (2016), Sung & Choi (2014), Iqbal et al. (2013), Barber & Bretz (2000). Some questions are added based on personal perspective to suitable for study's goals in a Vietnam consulting firm.

With purposes of this research, quantitative approaches are useful to abstract information. As such, dummy variables are employed to turn categories of responses to high and low score. Likert scale questions serves the main purpose of this research, which focuses on exploiting influence of each factor toward consultants' performance. A list of questions will be provided along with rating scale from 1 to 5 for scoring importance of each factor. The analysis of the survey data was conducted by using statistical techniques, which is exploratory factor analysis (EFA). This technique involves descriptive statistics, assumptions for data analysis, quantitative data analysis. EFA seeks to discover the underlying structure of a relatively large set of variables. EFA comprises three major stages: Assessment of suitability of data for factor analysis; Factor extraction; Factor rotation. Hair et al. (2010) stated that to use the EFA, the minimum sample size must be at least 50 and it is better to be more than 100. Pallant (2005) also mentioned that the ratio of observation/variables is 5:1 or for every variable we need 5 observations or samples, so the required number of samples is 22 x 5 = 110.

Finding and analysis

Sample description

Table 2 summarized total 126 valid responses in frequency and percentage. It can be seen that both male and female respondents are involved in the research and most of them (more than 97%) are at the age of below 30. Respondents have varied positions in consulting firms including Associate, Intern, Senior Consultant and Manager; however, more than 55% of them are Associate.

Table 2 Sample description

Criteria	Descriptions	Frequency	Percentage (%)
1. Age	22-25	76	60.3
	Under 22	29	23
	25-30	18	14.3
	30-40	3	2.4
2. Gender	Male	73	57.9
	Female	53	42.1
3. Position	Associate	70	55.6
	Intern	34	27
	Senior consultant	18	14.3
	Manager	4	3.2

Source: Conducted by authors, 2020

Reliability test

The most common measure of internal consistency used by researchers in psychology is Cronbach’s alpha. The study started testing the reliability of scale of factors affecting the entrepreneurial competences with 22 variables. In Table 3, Cronbach’s Alpha = 0.892, a good value, proves the reliability of scale. Three variables, OD2, RP1 and PA1, have small corrected item-total correlation value (under 0.3). If these items are deleted from the model, the new Cronbach’s Alpha will be higher than the current one (0.892). The authors use corrected item – total correlation and Cronbach’s Alpha if item deleted to alter low reliability variables. The low reliability index does not mean that the variables have no meaning to the final model, the problem is in the data collection process. In Table 3, three factors are eliminated since if they are deleted, the model is more reliable. OD2 – “Plans to develop organizational conditions to optimize individuals’ strength”; RP1 – “Rewarding and promoting policies are compliant with regulations and consultants’ expectations”; PA1 – “Platforms used in performance appraisal must be optimized”.

Table 3 Reliability test

Reliability Statistics	
Cronbach's Alpha	N of Items
.892	28

Source: Conducted by authors, 2020

Kaiser-Meyer-Olkin (KMO) test is a measure of how suited the data is for factor analysis. The test measures sampling adequacy for each variable in the model and for the complete model. KMO value varies from 0 to 1, of which the good KMO should be in range from 0.5 to 1. In Table 4, when conducting exploratory factor analysis, right from the first round, the test values are guaranteed since coefficient 0.5<KMO = 0.791 <1.0.

Table 4 KMO and Barlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.791
Bartlett's Test of Sphericity	Approx. Chi-Square	2101.492
	df	300
	Sig.	.000

Source: Conducted by authors, 2020

Table 5 shows that there are six variables of which Eigenvalue over 1 provide best summary information, or the first six principal components form the extracted solution. They explained nearly 70% (cumulative of variance = 69.615%) of the variability in the original twenty-five variables, so the research can considerably reduce the complexity of the data set by using these components, with only 30.385% loss of information. The rotation maintains the cumulative percentage of variation explained by the extracted component. The large changes in the individual totals suggest that the rotated component matrix will be easier to interpret than the unrotated matrix.

Table 5 Total Variance Explained

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.083	32.332	32.332	8.083	32.332	32.332	3.866	15.463	15.463
2	2.826	11.302	43.634	2.826	11.302	43.634	3.643	14.574	30.037
3	1.994	7.977	51.611	1.994	7.977	51.611	3.142	12.569	42.606
4	1.808	7.231	58.843	1.808	7.231	58.843	2.805	11.221	53.827
5	1.543	6.174	65.016	1.543	6.174	65.016	2.162	8.649	62.476
6	1.150	4.598	69.615	1.150	4.598	69.615	1.785	7.139	69.615

Source: Conducted by authors, 2020

Table 6 Rotated component matrix

Rotated Component Matrix[a]						
	Component					
	1	2	3	4	5	6
CP3	.843					
CP4	.838					
CP5	.831					
CP1	.791					
CP2	.670					
OD1						
PA2		.858				
RP3		.853				
RP2		.698				
PA4		.604				
PA3		.583				
RP4		.540				
ID1			.736			
ID3			.736			
ID5			.708			
ID2			.675			
ID4			.621			
CD3				.890		
CD2				.850		
CD4				.762		
OD5					.789	
OD3					.731	
OD4					.604	
CD1						.734
CD5						.678

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

Source: Conducted by authors, 2020

From Table 6, variable OD1 has no value then should be eliminated from the model. Therefore, the fact that the organizational intention to recruit outstanding people for a strong human resource has no meaning in this research. According to the matrix, six new groups have been formed (F1, F2, F3, F4, F5, F6):

- Group F1 includes four component variables related to consultants' performance (CP1, CP2, CP3, CP4, CP5). This group is the new dependent variable.
- Group F2 includes four variables of performance appraisal (PA2, PA3, PA4) and three variables of reward policies (RP2, RP3, RP4).
- Group F3 has five variables of individual development (ID1, ID2, ID3, ID4, ID5).
- Group F4 includes three variables of career development (CD2, CD3, CD4).
- Group F5 includes three variables of organizational development (OD3, OD4, OD5).

- Group F6 has two variables of career development (CD1, CD5).

Rotated component matrix suggests what components represent. 6 groups of variables are clearly displayed in Table 6, in which each group represents a component affecting dependent variables of this research. Having reviewed variables in each component, it is necessary to redetermine updated variables to assess in the next part of research. In addition, assessing many variables which have similar characteristic will consume time as well as complicating the model. Thus, the analysis transformed old group of variables into new groups with names reflecting their nature as in Table 7. New names applied are more clearly identity characteristics and nature of each component.

Table 7 Variables' transformation

Factor	Name	Variables	Relation
F1	Consultants' performance	CP1, CP2, CP3, CP4, CP5	Dependent
F2	Appraisal policies	PA2, PA3, PA4, RP2, RP3, RP4	Independent
F3	Individual development	ID1, ID2, ID3, ID4, ID5	Independent
F4	Promoting systems	CD2, CD3, CD4	Independent
F5	Organizational development	OD3, OD4, OD5	Independent
F6	Career development	CD1, CD5	Independent

Source: Conducted by authors, 2020

Table 8 Correlation of new variables

		F1	F2	F3	F4	F5	F6
	Pearson Correlation	1	.281**	.446**	.340**	.204*	.421**
F1	Sig. (2-tailed)		.001	.000	.000	.022	.000
	N	126	126	126	126	126	126
	Pearson Correlation	.281**	1	.470**	.413**	.431**	.343**
F2	Sig. (2-tailed)	.001		.000	.000	.000	.000
	N	126	126	126	126	126	126
	Pearson Correlation	.446**	.470**	1	.310**	.314**	.431**
F3	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	126	126	126	126	126	126
	Pearson Correlation	.340**	.413**	.310**	1	.336**	.307**
F4	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	126	126	126	126	126	126
	Pearson Correlation	.204*	.431**	.314**	.336**	1	.368**
F5	Sig. (2-tailed)	.022	.000	.000	.000		.000
	N	126	126	126	126	126	126
	Pearson Correlation	.421**	.343**	.431**	.307**	.368**	1
F6	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	126	126	126	126	126	126

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

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

Source: Conducted by authors, 2020

In Table 8, the results show Sig values are around 0, smaller than 5%, which means that linear correlation is weak. Sig values of dependent variable (F1) are smaller than 0.05, so the dependent variable has linear correlation with independent variables. Among each pair of independent variables, Sig values are smaller than 0.05 and Pearson correlation figures are high, so multi-collinear might happen. However, there is not enough evident to determine whether the multi-collinear exists among variables or not, so it needs variance inflation factor (VIF) in the next part.

As in Table 9, the Adjusted R Square value = 0.262 means that 26.2% of the variation of consultants' inherent attitude and ability is explained by the factors included in the model. Normally, researchers expect this value over 0.5, which indicates the suitability of applying this model in larger population. However, R Square value also depends on the sample size and the characteristics of the research. For such topic include complex context, including noise variances like psychology, behavior, human being, R Square values normally under 0.5. This research based on survey conducted in a company only which has limited population, so this adjusted R square value is acceptable. This point opens the new direction for research since there may be other factors affecting the consultants' performance, which needs to be studied further. The model summary table also shows the d value of Durbin Watson. Durbin Watson value = 1.747, which means "Do not reject H0: No evidence of autocorrelation". This is a good signal in the model since there is no linear correlation in the model. Table 9 shows the Sig. value = 0.000 <0.05. Thus, evidences in the model are appropriate for the general population.

Table 9 Model summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.540[a]	.292	.262	.80601	1.747

a. Predictors: (Constant), F6, F4, F5, F3, F2

b. Dependent Variable: F1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.075	5	6.415	9.875	.000[b]
	Residual	77.959	120	.650		
	Total	110.034	125			

a. Dependent Variable: F1

b. Predictors: (Constant), F6, F4, F5, F3, F2

Source: Conducted by authors, 2020

Research results

Table 10 Coefficients

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.449	.483		.931	.354		
	F2	-.002	.107	-.002	-.022	.983	.643	1.555
	F3	.373	.118	.293	3.166	.002	.690	1.450
	F4	.170	.080	.186	2.133	.035	.776	1.289
	F5	-.044	.091	-.043	-.484	.630	.740	1.351
	F6	.293	.103	.254	2.842	.005	.737	1.357

Coefficients[a]

a. Dependent Variable: F1

Source: Conducted by authors, 2020

There are two factors with the Sig. value under 0.05 and negative Beta values: F2 and F5. In other words, F2- "Evaluation and reward system" and F5- "Organizational development" have no meaning in the consultant's performance. These are the independent factors that have no effects on employees. No matter how they are improved, with other factors keep instantly, consultants cannot perform better. These factors need eliminating from the model. Whereas, there we have three meaningful variables: F3- "Individual development", F4- "Company policies of promoting", F6- "Career development". It is interesting that all of three factors are the benefits consultants can gain from the job at consultancies. The table shows that F3 group (individual development factors) have the biggest influence on consultants' performance. The table also shows the Beta values of three meaningful factors in the ascending order of F3, F6, F4. The two variables having negative Beta value (F2, F5) were eliminated from the model. This means Individual development is the most important and meaningful factor in the model. It has the highest influence level on dependent variable F1 – Consultants' performance.

Finally, VIF values are used to test the multi-collinearity. Normally, with survey using Likert scale, VIF less than 2 means that there is no multi-collinearity. Thus, multi-collinear does not occur in this model. Last but not least, as the purpose of the research, a regression equation of the model is proposed: **Y= 0.449 + 0.373*F3 + 0.17*F4 + 0.293*F6**

Discussions

Organizational development

Contrast to the initial author's expectation, overserved variables of Organizational development are eliminated from the model and this factor is proved to have no impact on consultants' performance in Vietnam. This result critically argues that statement by Robbins et al. (2020) that organizational development strives to improve the performance of individuals, groups, and the overall organization. Consulting service have been developed in Vietnam for nearly 30 years, not a long journey as in global market. This service is still a kind of new entrance and have large room to develop further. In fact, big consulting firms in Vietnam are branches of global brands such as Deloitte, KPMG, PwC, EY, McKinsey, and so on. Besides, there are a small market share hold by local firms, whose years of experience are less than the above big companies. In Vietnam, even though they focus in different classes of clients with different industry oriented, they are providing the similar consulting services. Therefore, there is no distinguishable objectives of consultancies that can affect the consultants. They perceive that all consulting firms have the same objective to provide client with high quality of service, then things consultants should focus is to improve their ability to enhance skills, knowledge and service they deliver. This is clearly demonstrated by the results of research that the Beta value of F5 is negative and the sig. value is 0.63. Thus, hypothesis H1 that Organizational development has a positive influence on consultants' performance is rejected.

Career development

Working at consulting firms is perceived to be ensured of career path. There are reasons supporting this perception. Not only consultants have opportunities to develop themselves but they are also provided with a clear career path. Consultants' development is a continuous experience-driven leaning process and the development needs for senior consultants, project leaders and partners should not in underestimated (Domsch, 2006).

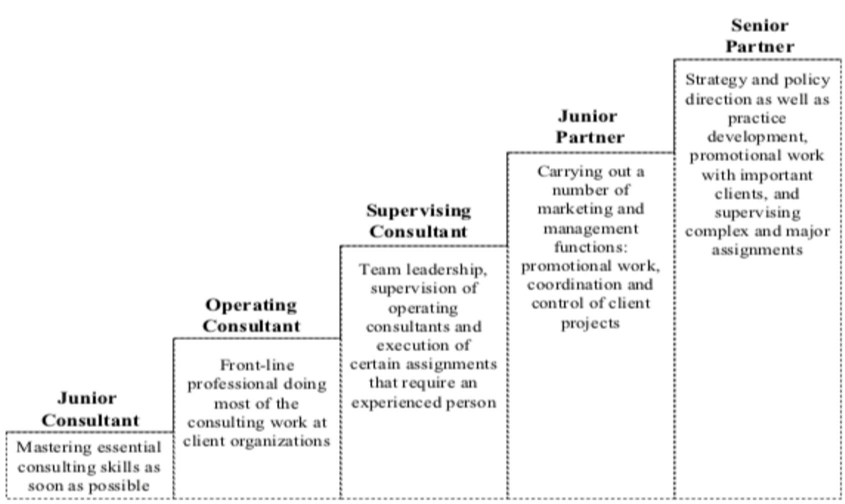

Figure 2 Career Structure in Consulting Firms (Kubr 2002)

As normal career structure described in Figure 2, in consultancies, it usually takes 6-12 years to reach the level of partner. The career path is clear and straight forward with stages. Consultants who have excellent performance can be allowed to skip one or some stages. Fast career progression positively motivates consultants and creates a dynamic and competitive working environment. In order to reach the partner level, any consultant need a long time of gaining experience and hard development. Meanwhile, consultancies provide well development methods and advantageous environment for employees to growth. The research showed that the observed variables of the Career development factor, the variables with the highest factor loading coefficient are CD1 (0.734) and CD5 (0.678) (Each consultant has been introduced clearly about career management and opportunities in the company, The company encourage consultants to reach higher levels in career path). In conclusion, the hypothesis H2 that Career development has a positive influence on consultants' performance is accepted. This is also a significant factor impacting consultants' performance (only after Individual development).

Individual development

It can be seen that the three remaining factors of the model directly connects to consultants' personal benefits, especially individual development. Actually, when being asked the reason why consultants choose their jobs, the most popular answer refers to chances of developing professional skills and broadening their knowledge as development programs in consulting firms are perceived to be valuable for individuals' improvement. All of respondents agree that training and developing programs delivered by their firms have not only helped them manage their work well, but also useful and applicable in other jobs even after they leave firms. This fact is in compliance with argument of Sung & Choi (2014) that corporate investment in the training, education and organizational learning have potential to enhance the innovative performance. Along with the changes in economy, requirements of consulting jobs become more complex, which challenge consultants' ability. They cannot rely on the inherent knowledge but must improve themselves day-by-day. This is more clearly demonstrated when in the observed variables of the Individual development factor, the variable with the highest factor loading coefficient (0.736) is ID1 and ID3 (Training and development programs adapt individuals' requirements; The training and development programs at consultancies is applicable to improve working results). Thus, Hypothesis H3 that Individual development has a positive influence on consultants' performance is accepted. This is also the most significantly impactful factors on the Consultants' performance.

Performance appraisal system

In the beginning, the author raised the hypothesis of the relationship between consultants' performance and the performance appraisal system. There are many arguments that the fair and clear performance appraisal may be motivation to boost employees' enthusiastic to work. However, the research proved a contrast fact. The Performance appraisal system factor is eliminated from the model as it has negative Beta value and too high sig. value (0.983). Iqbal et al. (2013) stated that there is a significant relationship exist between performance appraisal and employees' performance. Employees those feel that the results of performance appraisal are unfair they often leave the organization and their morale and involvement will let down. Consultants have ability to choose other jobs if they feel uncomfortable or unfair. In reality, rather than being impacted by companies' unfair policies, they choose to quit their job. Hypothesis H4 that Fair and clear performance appraisal system positively influence consultants' performance is rejected. The observed variables of this factor are removed from the model.

Rewarding system

Last but not least, rewarding, which is an important working objective of any employees, is proved to be significant factor influencing consultants' performance in Vietnam. According to the Need Hierarchy of Maslow, the highest demand of human is recognition, particularly in job, it is reflected by promotion and rewarding decisions. Almost respondents in the research told that they were attracted by the promoting policies of consultancies before deciding to join these companies. Rewarding is known as an effective method to encourage and motivate employees. In consultancies, rewarding is not limited by financial benefits but also includes prizes, certificate, promotion and so on. These kinds of reward encourage consultants to perform their highest ability to win other recognition as well as get the respect of people. This result is similar to Barber & Bretz (2000) that reward management systems have major impact on organizations capability to catch, retain and motivate high potential employees and as a result getting the high levels of performance. As the rewards are decided based on the consultants' performance, they tend must increase their quality as highest as possible to increase rewards they receive. This is demonstrated by the value of the variable RP3's loading factor at 0.858 (regarding Reward and promotion are decided based on working performance (productivity and effectiveness). Therefore, hypothesis H5 that Rewarding system have a positive influence on consultants' performance is accepted.

Managerial implications

As mentioned above, three factors that significant influence consultants' performance are Individual development, Career opportunities and Promotion policies. For Individual development, one of the most common reasons for being a consultant is the opportunities to development themselves to be professional and skillful. Since consulting jobs require intensive knowledge with years of experience, people who have plan to work in this field must sharpen their ability and improve to reach higher level. HR and learning teams can put many efforts on learning materials so that all the consultants are well equipped with necessary knowledge and skills when working. Training and development programs are arranged frequently but still suitable for each individual's schedule, the content is updated consecutively by consultants with valuable experience. For Career opportunities, firms can provide consultants with chances of job rotation and even internationally exchanging. Experiencing in different positions, service lines and work places help consultants find out their strength and interest. This fact motivates consultants to work better and get the chance for experiencing. Besides, career path should be clear and well oriented for them to know as well as have plans to develop. For Promotion policies, this factor directly relates to consultant's performance since their performance is the criteria for promotion decisions. In fact, consultants who have distinguished performance can move on track faster than others, which is called "fast track". This policy is advantageous for motivation so that consultants are inspired to perform better as promotion policies is associated with performance appraisal.

Conclusion, limitation and direction for future research

The research pointed out three common factors in HRD affecting consultant's performance in Vietnam: individual development, career opportunities and company's policies for rewarding and promoting. Among three factors, individual development was found to be most meaningful to improve consultants' performance. All of these factors are benefits that individuals can gain from consultancies and consulting jobs. In other words, they significantly affect consultants' performance. Once other conditions being equal, well-trained consultants are more effective and productive than others; consultants who are motivated by attractive promoting policies also perform better than who are not; and consultants who are have an intention to gain experience are also more effective and productive than apathetic ones. If one of these factors is missing, there is a negative impact upon individual and organizational performance.

However, this paper cannot argue that effective HRD can guarantee organizational success and prevent company from dramatically decrease in quality or failure of consultants. This suggests that even though HRD has a particularly important role to play in improving the contribution of human resources, it should not be perceived as a panacea for all problems related to consultants' performance. It means that HRD is not the only solution for improving individual and organizational performance. Beside to three identified factors, there are existing variables may matter consultants' performance, which need to be further studied. The present study extends previous researches in HRD in consulting firms, not all sectors in the economy. It is an important step forward in understanding the factors that influence the effectiveness of HRD practices, which subsequently affect both individual and organizational performance.

Since the main focus of this study is to develop a framework for human resource development and consultants' performance, future research should be directed at applying the framework in assessing the effectiveness of HRD in the consulting firms and the influence of HRD on the performance management in the organization.

References

Aguinis, H., (2009). *Performance Management*, 2nd Edition. Prentice Hall/Pearson Education, Upper Saddle River, London.

Armstrong, M., (2007). *A Handbook of Employee Reward Management and Practice. 2nd Edition.* Publisher: Kogan Page.

Barber, A. & Bretz, R. (2000). *Compensation, attraction, and retention. In: Compensations in Organizations: Current Research and Practi*ce. San Francisco: Jossey Bass.

Daniel, C. O. (2019). Employee Rewards Policy and Its Influence on Organizational Performance, *International Journal of Research Science & Management*, 6(3), 13-23.

Domsch, M. E. (2006). *Human Resource Management in Consulting Firms*. Hamburg: Heidelberg.

Dessler, G. (2020). *Human Resource Management*, 16th edition. Pearson Education.

Hair, J., Babin, W. & Anderson, R., (2010). *Multivariate Data Analysis: A Global Perspective. 7th Edition.* New Jersey: Pearson Prentice Hall.

Howard, A. & Bray, D. W., (1988). *Managerial Lives in Transition: Advancing Age and Changing Times.* Executive Development.

Iqbal, N., Ahmad, N., Haider, Z., Batool, Y., & Ulain, Q. (2013). Impact of performance appraisal on employee's performance involving the moderating role of motivation. *Arabian Journal of Business and Management Review*, 3(1), 37-56.

Jacobs, R. & Washington, C., (2003). Employee development and organizational performance: a review of literature and directions for future research. *Human Resource Development International*, 6(3), 343-354.

Jain, S. & Gautam A. (2014). Performance Management System: A Strategic Tool for Human Resource Management. *Prabandhan Guru*, 5(1&2), 28-31.

Jon, M. W. & Randy, L. D., (2012). *Human Resource Development*, 6th edition. Nelson Education, Ltd.

Kadam, R. N. (2012). Performance Management and Human Resource Development: A challenge before India. *International Journal of Advanced Research in Management and Social Sciences*, 1(4), 91-96.

Kakui, I. & Gachunga, H., (2016). Effects Of Career Development On Employee Performance In The Public Sector: A Case Of National Cereals And Produce Board. *Strategic Journals of Business & Change Management,* 3(3), 307-324.

Kenton, W., (2019). *Absolute Performance Standard* [Online]. Available at: https://www.investopedia.com/terms/a/absolute-performance-standard.asp [Accessed 15 April 2020].

Kubr, M. (2002). *Management Consulting: A Guide to the Profession. 4th edition*. Geneva: International Labour Organization.

McGraw, P., (2014). A review of human resource development trends and practices in Australia: Multinationals, locals, and responses to economic turbulence. *Advances in Developing Human Resources*, 16(1), 92-107.

Mussie T. Tessema, (2015). Assessment of HR Development and Utilization: A Conceptual Framework. *International Journal of Managerial Studies and Research,* 3(3), 32-43.

Noe, R. A., Hollenbeck, J. R., Gerhart, B., & Wright, P. M. (2016). *Fundamentals of human resource management* .6th edition. New York, NY: McGraw-Hill Education.

Osmani, F. & Maliqi, G., (2012). Performance Management, Its Assessment and Importance. *Procedia - Social and Behavioral Sciences*, 41, 434-441.

Pallant, J., (2005). *SPSS Survival Guide: A Step by Step Guide to Data Analysis Using SPSS for Windows.* 3rd edition. New York: Open University Press.

Phiphadkusolkul, A., (2012). The initial impact of organization development interventions on performance management, employee motivation, job satisfaction, and employee performance at a Thai SME, *AU-GSB e-Journal* 5(1), 38-48.

Raymond, N. A., (2010). *Employee Training and Development.* 5th edition. New York: McGraw-Hill/Irwin.

Richter, A., Dickmann, M. & Graubner, M., (2008). Patterns of human resource management in consulting firms. *Emerald Insight,* 37(2), 184-202.

Robbins, S.P. and Judge, T.A. (2019). *Organizational Behavior,* 18th edition. Pearson Education.

Robbins, Stephen P., Coulter, Mary A., De Cenzo, David A. (2020). *Fundamental of management*, 11th edition. Pearson Education.

Shen, J. & Roger, D., (2006). Training and Management Development in Chinese multinational Mark Saunders. *Employee Relations*, 28(4), 342-362.

Sung, S. & Choi, J., (2014). Do organizations spend wisely on employees? Effects of training and development investments on learning and innovation in organizations. *Journal of Organizational Behavior,* 35(3), 393-412.

Tahiri, A., Kovaci, I. & Krasniqi.A. (2020). Human Resource Management, Performance Management and Employee Performance Appraisal by SME Managers in Kosovo. *International Journal of Economics and Business Administration*, 4, 288-298.

Tardi, C., (2019). *Performance Management* [Online]. Available at: https://www.investopedia.com/terms/p/performance-management.asp [Accessed 15 April 2020].

Thuy N. & Trinh E. (2021). Human Resource Development: Overview of the Performance Evaluation and Performance Appraisal viewpoints. *Journal La Bisecoman*, 1(5), 15-19.

Vinesh, (2014). Role of Training & Development in an Organizational Development. *International Journal of Management and International Business Studies*, 4(2), 213-220.

Wayne, M. R. & Joseph, M. J., (2016). *Human Resource Management.* 14th edition. Courier Kendallville.

William, R. J. & Roland, S. L., (2005). *Practicing Organization Development: A Guide for Consultants.* 2nd edition. Pfeiffer an Imprint of Wiley.

Yahaya, K.K., Ann, H.J., Ibrahim, Y., Abdullah, A.C., Axixan, N., Othman, S.Z., Mei, T.S. & Daud, W.D.W. (2009). *Compensation and Incentives. Fundamentals of Human Resource Management.* Open University Malaysia.

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

IMPACTS OF SOCIAL MEDIA AND DESTINATION IMAGE ON TRAVEL INTENTION IN THAILAND

Luis Victor Silva Fernandez
School of Business, University of the Thai Chamber of Commerce
126/1 Vibhavadi Rangsit Rd., Dindang, Bangkok 10400, Thailand
luissilva2891@gmail.com

Abstract

Thailand is one of the most popular tourist destinations in recent years. Tourists/travelers have recently been envisioned as people who manage their journeys directly on the Internet. While social media plays an important role in tourists' intentions to travel, most current research, particularly in the context of Thailand, has largely ignored the effects of variables such as Facebook, Twitter, YouTube, and destination image on visitors' intentions to travel. The current study created and evaluated the aforementioned theoretical framework, which illustrates the link between social media use, destination image, and travel intention. Quantitative research was done online and offline in this study to examine the travelers' behavior, with the strategy of this study being to obtain data, information, and ways to collect the essential information. The study findings demonstrated that social media use positively and significantly predicted travel intention. Moreover, destination image positively and significantly predicted travel intention. Therefore, social media is an excellent medium for influencing people's travel intention and destination image, with regular users of social media for travel information having a better destination image and greater travel intention.

Key words: social media, destination image, travel intention

Introduction

People, as well as the planet, have evolved over the centuries. The advancement of new information and communication technologies (ITC) has had a profound impact on how various world cultures work. It has resulted in fast economic change as well as a shift in the competitive landscape. The tourism business is one of the important industries that grows practically every year, and tourist sites strive to attract the greatest number of tourists each year (Team-Statista, 2015; UNWTO, 2015). Traditionally, tourism was only interested in sites with high diffusion and a large number of tourists, or places that satisfied specific acceptability criteria and were of sufficient quality to meet the requirements and wishes of westerners. Tourism, on the other hand, has been compelled to develop in order to meet new consumer demands and other activities such as sports, adventure, and nature. The tourism business is distinguished by the interconnectedness of the numerous economic sectors that contribute to its growth. It usually entails actions such as the exporting of an area or nation to another desirable or receptive location, which normally results in the creation of new employment as well as the stabilization of the economy through the use of foreign currencies.

As evidenced by a large number of foreign travelers, the tourism sector plays a critical role in the global economy. International travelers and tourists pay costs for lodging in foreign countries, such as renting rooms and motels. They also cover the costs of goods like food, transportation, entertainment, and other recreational activities (Klein et al., 1999). They also pay levies at the locations they visit. Parks and sanctuaries are examples of such areas. The funds raised are intended to help the country's economy thrive. Thailand's tourist industry is one of the country's most important sources of revenue (Bloom Consulting, 2015; UNWTO, 2015). Today, tourism is mostly conducted to satisfy new consumers, with the number of customers at an all-time high. Due to a large number of enterprises, there is a lot of rivalry in the market. Most organizations strive to provide the greatest services in order to gain client loyalty and happiness, which is currently seen as one of the most essential components in generating considerable long-term profits.

Thailand continues to draw millions of visitors each year from all over the world and now as well despite Covid and after opening the country up. The existence of a diversified environment, including beaches, historical monuments, and temples, aids the appeal of various tourism sectors. Tourism development has revolutionized a number of businesses from their production systems to product commercialization while also maintaining customer interactions, resulting in new prospects for innovation that are nearly constant and business channel exchanges that were previously non-existent (Kotler, 1987; Quelch and Klein, 1996).

The advancement of information and communication technology (ICT) has made it easier for many businesses to start and thrive. Some essential goods and services, on the other hand, rely heavily on their users to develop. Several researchers have identified tourism as one of these services (Devis, 2010; Mariani and Felice, 2016). ITC has increased not just tourist consultation but also reservations. The tourist industry's rapid growth necessitates a continual development of its administration and marketing services, which must be fulfilled using ICT.

Today, social media sites encourage people to utilize the internet. Social media platforms make it easier to collaborate on content that improves customers' purchasing experiences on a company's online platform. Facebook is now the most popular social network, followed by twitter.

While social media plays an important role in tourists' want to travel, most current literature, particularly in the context of Thailand, has largely ignored the effects of Facebook, Twitter, YouTube, and destination image on visitors' desire to travel. Furthermore, the Covid-19 epidemic has had enormous financial consequences for Thailand's tourism industry, necessitating new approaches to attracting and maintaining visitors. As the travel industry adjusts to the new normal, the current research will be useful in understanding the effects of social media and destination image on travel intent.

This study looks at how people use social media and how it affects their travel plans in Thailand. The study's findings might aid in meeting the demands of the tourist industry, particularly in terms of obtaining the necessary number of visitors via social media. The current study emphasizes the relevance of using social media as a tool for tourist promotion and internet-based decision-making. As a result, the current study's findings may aid in positioning the tourist industry to meet the demands of the twenty-first century.

The present study's findings also add to the existing body of information about the effects of social media and destination image on travel intention in Thailand. As a result, future researchers may find the findings of the study useful as a reference point.

Specific objectives

The specific objectives include:

1. What is the influence of Social media use on Travel Intention in Thailand?

2. What is the influence of Destination Image on Travel Intention in Thailand?

Literature review

Travel intention

The attitude or travel intention is significant since it has the capability to predict certain behaviors (Kraus, 1995). Coming to selecting vacation places, the main purpose of the trip is critical. The level that is symbolizing how people are feeling has been characterized as a human's attitude toward particular behaviors (Ajzen, 1991). Lam and Hsu (2006) investigated how travel intentions are developed and adjusted in order to reap the benefits of tourism. Tourist travel inclinations are heavily influenced by consumer variables (also known as motives). Consumer factors are defined by Crompton (1979) as the level of enjoyment that an individual anticipates from travel. The motivations of travelers impact their choice of travel location, and these may be divided into two categories: socio-psychological and cultural factors (Crompton, 1979).

The willingness of a visitor to visit and suggest a certain place to family and friends is referred to as tourist intentions (Andreassen et al., 1998). Apart from motivations, the destination image, which is used as a mediator to explain the impact of various tourism promotion strategies, has an impact on visitor intentions (Jalilvand et al., 2000). Despite some people's negative sentiments of destination loyalty, according to Opperman (2000), some individuals continue to buy from the same places. As a result, revisit and other behavioral intentions can be effective predictors of future behavior. For potential visitors, relatives and friends' recommendations are the most dependable source of information, demonstrating the positive impact of a favorable WOM (Yoon et al., 2005).

Destination image

Before visiting a certain place, travelers acquire a significant quantity of information about their journey from several sources. The knowledge has an impact on travel intention, either directly or indirectly. The image of a destination has a favorable impact on travel intention since it stimulates potential visitors (Kim, Hwang & Fesenmaier, 2005). Destination pictures are a person's thoughts, beliefs, and impressions about a specific location (Crompton, 1979). It is regarded as one of the most crucial factors for vacationers when selecting a destination (Buhalis, 2000). Tourist pleasure is boosted by the destination's image (Chi et al., 2008). As a result, destination ads must be more cautious in developing positive views in order to sustain customer loyalty (Liu & Kim 2005).

Social media in tourism

Kaplan-Haenlein (2010) described social media as a collection of Internet apps that provide the ideological and technological underpinning of a web 2.0 that enables the interchange of User Generated Content. The importance of digital purchasers was investigated by Capgemini (2012). This study looked at user patterns and divided online users into six groups. First, there's the social digital shopper, who spends much of their time on social media, sharing their personal thoughts and prior experiences, and who relies on mobile phone apps to purchase and analyze things on their behalf. Second, there are the digital shopaholics, who are early adopters who like exploring and purchasing products in the examined categories (food, health, personal care, fashion, electronics, and so on) via digital applications and other forms of technology. Third, there are the occasional online shoppers, who are mostly over 45 years old and are unfamiliar with online shopping, but when they do, they utilize social media to compare items. Fourth, sensible online shoppers are the second most active online shoppers, since they frequently use social media when purchasing but have little interest in social media. The value searchers, who are price sensitive and buy primarily to discover the greatest deals on the things they want, are the fifth group. The majority of them are women who are uninterested in shopping online or using new technology. Finally, the techno-averse buyer, who might be young or elderly and is largely situated in Europe, is sometimes uncomfortable purchasing using modern technologies. Recognition of unmet requirements, search for information, analysis, and assessment of alternatives, buy choice, behavior, and attitudes after the purchase are all factors that impact online purchasing decisions (Kotler et al., 2008).

Travel planning was proposed by Engel, Blackwell, and Miniard (1990) and Kotler, Bowen, and Makens (1999). Jeng et al. (2002) discovered that before purchasing a vacation plan, travelers frequently recall and identify several sources of travel information when deciding on a location. Tourist sites' information, in the form of ratings and comments left by other users, might be regarded as a restricted source of information. This is attributable to a number of factors. The comments presented are only the preferences of other users and do not constitute an in-depth examination of the product or service under consideration. The information's writers are likewise not drawn from a representative sample of users. Users are often highly happy or unsatisfied, and they are more active in analyzing and commenting on their experiences (Andreassen & Lindestad, 1998). However, Dellarocas and Narayan (2006) discovered that one must consider the possibility of interested parties altering and extolling the traits and virtues of their products.

When making a purchasing choice on the internet, the consumer is confronted with a large volume of data that might be difficult to digest. As a result, the numerical evaluations (scores on a 5- or 10-point scale) and the volume of comments (which indicates the number of people who support the choice) give easy-to-understand data and quick processing, allowing for faster decision-making. The information stated in numbers aids in the screening and/or profiling of offers and/or alternatives. Nielsen (2012) deemed numerical evaluations to be valid information in this regard. Consumers are ready to pay more for items with a "excellent" rating (numerically 5) than for products with a "good" rating (numerically 4), which does not go unnoticed by firms that sell them, resulting in prices that are higher than the average premium (ComScore, 2007).

However, in order to comprehend the social media effect exerted by evaluations and comments, the subject's vulnerability to this type of social influence must also be taken into account. It is a personality feature that differs across individuals (Bearden, Netemeyer, & Teel, 1989), and it describes the user's higher or reduced sensitivity to pay attention to and depend on the views and behavior of other users (numerical evaluations and comments) in their buying decisions.

According to Gretzel, Yoo, and Purifoy (2007), social media has a considerable effect and involvement in buying decisions. The authors discovered that some online evaluations provided by other travelers in a travel-related consumer review and on the rate website boost travelers' confidence throughout the decision-making process. The client also stated that before the trip, he studied multiple postings and evaluations from other travelers about various areas and their lodgings (Gretzel et al., 2007). This serves as a source of information for the traveler, allowing them to limit their alternatives. Travelers frequently publish their hotel ratings and preferences while on the road. During or after the trip, they generally submit their evaluations, comparisons, and personal experiences on social networking platforms.

Ristova and Angelkova (2018) performed a study on students to investigate the impact of social media on Millennials' tourism destination preferences. The poll was done online and distributed to the email accounts of their students. A total of 100 students from Gevgelija's Faculty of Tourism and Business Logistics took part in the poll. According to the conclusions of the survey, Facebook and Instagram are the most popular social media platforms, mostly for uploading images of tourist destinations and travel, but also for assisting in the selection of a tourist destination. The good influence of photos uploaded online from a tourist site on social media is enough to entice them to go there. Visitors consider the link between national image and their decision to come utilizing social media as a medium. The study found that the more positive a destination's image is, the more likely people are to want to visit it (Nevena, 2016).

Damanik et al. (2019) did a study to determine the social media platforms utilized by the Kota Tua tourism area manager to promote his business and to compare the performance of each platform. The study used an accidental sampling approach and enlisted the help of 100 people. The findings of the data analysis reveal that there is a link between social media variables and tourist motivation to visit Kota Tua Jakarta. As a result, social media and travel motivation have a favorable impact on a person's desire to travel. It was also discovered that a favorable association between social media and the destination image is a significant aspect that has a direct beneficial impact on travel intention (Chun-Pei, 2018).

Methodology

Research design

The goal of this study was to establish and evaluate the previously indicated theoretical framework, which depicts the link between Social Media Use, e-Word of Mouth, Destination Image, and Travel Intention. Quantitative research was not undertaken online or offline to measure traveler behavior in this study. To obtain the needed data, this study gathered data, information, and methodologies. The purpose of the survey is to test the hypothesis and, as a result, respond to the research question. To gather data from this survey online, a questionnaire is disseminated by mail, social media sites, and mobile applications.

The current research created and evaluated the previously indicated theoretical framework, which depicts the link between Social Media Use, e-Word of Mouth, Destination Image, and Travel Intention. A quantitative study was undertaken online and offline in order to examine the travelers' behavior, with the strategy to this study being to collect data, information, and ways to get the essential information. The purpose of the survey was to test the hypothesis and, as a result, to respond to the research question. A questionnaire is disseminated by mail, social media sites, and mobile applications in order to collect data from this survey online.

Data collection procedure

The English questionnaire was sent to people who were on vacation or residing in Thailand, and it was distributed online. They were recruited from Thailand's tourism hotspots and from people working in a variety of enterprises. Emails and other social media sites such as Facebook and Twitter were used to distribute the surveys. Individuals who are actively working, tourists, self-employed, and non-Thai citizens who are now vacationing in Thailand make up the population. This research was confined to Thailand's geographical region. Thailand was picked because it attracts a significant number of tourists each year from all around the world.

In this section, the questionnaire was addressed for tourists, and the sample size was measured with the Cochran formula. This formula was used to identify and determine the sample size for this study. The Cochran equation was used to determine the sample size; the size of this study was 384 individuals, with a 5% margin of error and a confidence level of 95% and P=.5. The formula below is used.

$$N = \frac{P\,(1-P)\,(Z)^2}{e^2}$$

$$N = \frac{(0.50)\,(1-0.50)\,(1.96)^2}{0.05^2}$$

$$N = \frac{(0.50)\,(1-0.50)\,(3.8416)^2}{0.0025}$$

$$N = \frac{0.9604}{0.0025} = 384.16 = 384$$

Hence, the sample population = 384

Statistical test for the analysis of the data

After collecting the answers, travelers' data was exported to SPSS Statistics for inferential analysis. The first step was to describe the statistics to define the sample and determine what attributes are the most influential and what functionalities and benefits tested the hypothesis. The second step aimed to determine the hypothesis and if the independent variable affects directly the dependent variable. Regression analysis was employed to determine the strengths of the predictors of travel intention, which include the destination image and social media usage. It was also used to predict the forecast of travel intentions in Thailand.

Results and discussion

Influence of social media use on travel intention

The study examined the impacts of social media on Thailand as a destination image and travel intention. The study findings demonstrated in Table 1 shows there were higher rates on the use of social media to search travel information. In this regard, the respondents indicated that they would use Facebook to get traveling information to Thailand (M = 4.11; SD = 1.29), use Instagram to get traveling information to Thailand (M = 3.43; SD = 1.25), use Twitter to get traveling information to Thailand (M = 4.28; SD = 1.43), and use YouTube to get traveling information to Thailand (M = 3.93; SD = 1.45).

Table 1 The respondents' views on the impacts social media use

Item	Mean	Std. Dev. [1]
I will use Facebook to get traveling information to Thailand	4.11	1.29
I will use Instagram to get traveling information to Thailand	3.43	1.25
I will use Twitter to get traveling information to Thailand	4.28	1.43
I will use YouTube to get traveling information to Thailand	3.93	1.45

The study further sought to determine the relationship between social media usage and travel intention in Thailand. The study further found that social media use positively and significantly predicted travel intention ($\beta = .803$, $t = 9.639$, $p < .05$), as demonstrated in Table 2. The beta values, the t-test, the p-values, as well as the variance inflation factors are presented Table 2. In this regard, a unit increase in social media usage leads to 0.803 increase in the respondents' travel intention. Moreover, the greater the magnitude of T ($T = 9.639$) the greater the evidence against the null hypothesis. The p-value ($p < 0.05$) shows the null hypothesis is rejected conclude that there's a statistically significant difference between social media usage and travel intention.

Table 2 Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	collinearity statistics	
	B	Std. Error	Beta			tolerance	VIF[2]
(Constant)	-.239	.127		7.888	.000		
social media	4.306	.054	.803	9.639	.000	0.020	5.010

a. Dependent Variable: travel intention

The study findings demonstrated that to a greater extent, facebook, Instagram, twitter, and youtube influenced the travel intention of the respondents. The findings from regression analysis further indicated that social media use positively and significantly predicted the respondents' level of travel intention. These study findings are similar to the study conducted by Engel et al. (1990), and Kotler et al. (1999) who found that when making decisions on a travel destination, the tourists usually recollect and identify many sources for travel information before purchasing the travel plan. Similarly, Dellarocas and Narayan (2006) found that one must consider the possibility of the interested parties manipulating and praising the contents of their products' qualities and virtues through online platforms.

Influence of destination image on travel intention

The study aimed to examine the respondents' opinion on Thailand as a destination image. The study findings demonstrated in Table 3 indicate that there was a higher mean and lower standard deviations on the attributes associated with the destination image. These factors include the fact that information from social media would depict Thailand as an absolutely a good place (M = 4.11; SD = 1.29), and many tourists on social media would recommend Thailand as a favorite climate (M = 3.43; SD = 1.67). In addition, the respondents would communicate with each other about their travel experiences to Thailand to show good impressions (M = 4.25; SD = 1.45), and that they would see people on social demonstrating that the quality of products and services as well as the quality of stay in Thailand would be good (M = 3.93; SD = 1.47).

Table 3 The respondents' view on the destination image

Item	Mean	Std. Dev.
Information from social media will depict Thailand as an absolutely a good place	4.11	1.29
Many tourists on social media will recommend Thailand as a favourite climate	3.43	1.67
We will communicate with each other about our travel experiences to Thailand, which will show a good impression	4.25	1.45
I will see people on social demonstrating that the quality of products and services as well as the quality of stay in Thailand will be good	3.93	1.45

The study further examined the relationship between destination image and travel intention in Thailand. The study findings demonstrated that the destination image positively and significantly predicted travel intention ($\beta = .544$, $t = 8.068$, $p < .05$), The beta values, the t-test, the p-values, as well as the variance inflation factors are presented Table 4. In this regard, a unit increase in destination image leads to 0.544 increase in the respondents' travel intention. Moreover, the greater the magnitude of T ($T = 9.088$) the greater the evidence against the null hypothesis. The p-value ($p < 0.05$) shows the null hypothesis is rejected conclude that there's a statistically significant difference between social media usage and travel intention.

Table 4 Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	collinearity statistics	
	B	Std. Error	Beta			tolerance	VIF
(Constant)	-.239	.127		7.888	.000		
destination image	.807	.029	.544	8.068	.000	0.020	5.010

a. Dependent Variable: travel intention

The majority of respondents described Thailand as a nice destination with a positive impression, and the quality of items and services was good, according to the data. The regression analysis revealed that destination image affected travel intention in a favorable and substantial way. Before visiting a certain place, travelers obtain a significant quantity of information about their journey from several sources. These findings are comparable to those of Kim et al. (2005), who found that the picture of a location has a favorable impact on travel intention because it motivates potential. Tourist pleasure is boosted by the destination's image (Chi et al., 2008). As a result, destination ads must be more cautious in developing positive views in order to sustain customer loyalty.

Conclusion and recommendations

Conclusion

The goal of the study was to see how social media influenced travel intentions in Thailand. According to the findings, respondents' degree of travel intention was positively and significantly predicted by their usage of social media. According to the findings, social media is an effective tool for influencing people's travel intentions and destination perceptions, with regular users of social media for travel information having a more positive perception of their destination and higher travel intention. The study also found that the image of a location affects travel intention in a favorable and substantial way. Tourist visit intention is influenced by both cognitive and emotive destination representations, according to the findings.

Recommendation

According to the study's findings, Thailand's tourism attractions should engage more in social media marketing and other digital platforms in order to boost visitor numbers. The government and the national tourism sector may play an active role in the construction of an online forum for communicating with visitors as well as a platform for ongoing interaction and information exchange between tourists. Tourist input, whether positive or negative, may assist Thailand's government and tourism industry improve tourist destinations.

This paper presents the main practical implications of our research work for destination image management. Thailand's social media content strategy might be better controlled and distinguished by providing useful information, and reinforcing destination iconography can help with image building. Similarly, a destination's competitive advantage may be increased based on experiences and connections between a style of travel and the type of content. User-generated content is essential for promotional and marketing activities since it is a potent tool for gaining tourist confidence. However, in order to achieve a positive image promotion outcome, all stakeholders' involvement should be recognized and taken into account.

Limitations

Although the study's findings may be generalized in terms of travel intentions in Thailand, such generalizations should be made with caution due to various limitations in the current study. First, due to the dynamic nature of the tourist business, the data gathering exercise was only undertaken at one moment in time, and it may no longer be relevant in the future. Furthermore, because the study primarily used quantitative research, it was unable to obtain information on the respondents' sentiments and emotions. Furthermore, no SEM^3 was employed in this investigation.

Future studies

In this study, the effects of social media and destination image on travel intention in Thailand were investigated. Because the study only included people who planned to visit Thailand, additional research in other countries is needed to acquire comparable results. Furthermore, while the current study focused only on the impact of social media, future research should include additional variables, such as the impact of information intensity on the moderating process. Furthermore, because the results of this study were derived from a longitudinal study, cross-sectional studies might be useful in future research.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Andreassen, T. W., & Lindestad, B. (1998). Customer loyalty and complex services: The impact of corporate image on quality, customer satisfaction, and loyalty for customers with varying degrees of service expertise. *International Journal of Service Industry management*.

Arndt, J. (1967). Word of mouth advertising: A review of the literature.

Baloglu, S. (2000). A path analytic model of visitation intention involving information sources, socio-psychological motivations, and destination image. *Journal of Travel & Tourism Marketing*, *8*(3), 81-90.

Barich, H., & Kotler, P. (1991). A framework for marketing image management. *MIT Sloan Management Review*, *32*(2), 94.

Bearden, W. O., Netemeyer, R. G., & Teel, J. E. (1989). Measurement of consumer susceptibility to interpersonal influence. *Journal of consumer research*, *15*(4), 473-481.

Binter, U., Ferjan, M., & Neves, J. V. (2016). Marketing Mix and Tourism Destination Image: The Study of Destination Bled, Slovenia. *Organizacija*, *49*(4), 209-223.

Bogdanovych, A., Berger, H., Simoff, S. J., & Sierra, C. (2006). Travel agents vs. online bookings: tackling the shortcomings of nowadays online tourism portals. In *International Conference on Information and Communication Technologies in Tourism*. Springer.

Buhalis, D. (2000). Marketing the competitive destination of the future. *Tourism Management*, *21*(1), 97-116.

Burnkrant, R. E., & Cousineau, A. (1975). Informational and normative social influence in buyer behavior. *Journal of Consumer research*, *2*(3), 206-215.

Chi, C. G. Q., & Qu, H. (2008). Examining the structural relationships of destination image, tourist satisfaction and destination loyalty: An integrated approach. *Tourism Management*, *29*(4), 624-636.

Cox, C., Burgess, S., Sellitto, C., & Buultjens, J. (2009). The role of user-generated content in tourists' travel planning behavior. Journal of Hospitality Marketing &

Management, 18(8), 743-764. Retrieved from:https://www.tandfonline.com/doi/abs/10.1080/19368620903235753

Crompton, J. L. (1979). Motivations for pleasure vacation. *Annals of tourism research*, *6*(4), 408-424.

Damanik, D., Wachyuni, S. S., Wiweka, K., & Setiawan, A. (2019). The Influence of Social Media on the Domestic Tourist's Travel Motivation Case Study: Kota Tua Jakarta, Indonesia. *Current Journal of Applied Science and Technology*, 1-14.

Dellarocas, C., & Narayan, R. (2006). A statistical measure of a population's propensity to engage in post-purchase online word-of-mouth. *Statistical Science*, *21*(2), 277-285.

Engel, J. F., Blackwell, R. D., & Miniard, P. W. (1990). Customer behavior. *Hinsdale, IL: Dryden*.

Gerbner, G., & Gross, L. (1976). Living with television: The violence profile. Journal of communication, 26(2), 172-199. Retrieved from: https://academic.oup.com/joc/article-abstract/26/2/172/4553823

Gerbner, G., & Gross, L. (1976). Living with television: The violence profile. *Journal of communication*, *26*(2), 172-199.

Goldsmith, R. E., & Horowitz, D. (2006). Measuring motivations for online opinion seeking. *Journal of interactive advertising*, *6*(2), 2-14.

Gretzel, U., Yoo, K. H., & Purifoy, M. (2007). Online travel review study: Role and impact of online travel reviews.

Gruen, T. W., Osmonbekov, T., & Czaplewski, A. J. (2006). eWOM: The impact of customer-to-customer online know-how exchange on customer value and loyalty. *Journal of Business Research*, *59*(4), 449-456.

Henning-Thurau, T. (2004). Motive des lesens von kundenartikulationen im internet: theoretische und empirische analyse. In *Konsumentenverhalten im Internet* (pp. 171-193). Gabler Verlag.

Iso-Ahola, S. E. (1982). Toward a social psychological theory of tourism motivation: A rejoinder. *Annals of tourism research*, *9*(2), 256-262.

Jalilvand, M. R., Samiei, N., Dini, B., & Manzari, P. Y. (2012). Examining the structural relationships of electronic word of mouth, destination image, tourist attitude toward destination and travel intention: An integrated approach. *Journal of Destination Marketing & Management*, *1*(1-2), 134-143.

Jang, S., Bai, B., Hu, C., & Wu, C. M. E. (2009). Affect, travel motivation, and travel intention: A senior market. *Journal of Hospitality & Tourism Research*, *33*(1), 51-73.

Jeng, J., & Fesenmaier, D. R. (2002). Conceptualizing the travel decision-making hierarchy: A review of recent developments. *Tourism Analysis*, *7*(1), 15-32.

Kaperonis, S. D. (2018). The Impact of Social Media on user's Travel Purchase Intention. *DATA ANALYTICS 2018*, 60.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*, *53*(1), 59-68.

Kaplan, A. M., & Haenlein, M. (2012). The Britney Spears universe: Social media and viral marketing at its best. *Business Horizons*, *55*(1), 27-31.

Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and gratifications research. The public opinion quarterly, 37(4), 509-523. Retrieved from: https://www.jstor.org/stable/2747854

Kim, D. Y., Hwang, Y. H., & Fesenmaier, D. R. (2005). Modeling tourism advertising effectiveness. *Journal of Travel Research*, *44*(1), 42-49.

Kotler, P. (1987). Semiotics of person and nation marketing. *Marketing and Semiotics. New Directions in the Study of Signs for Sale*, 3-12.

Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and social psychology bulletin*, *21*(1), 58-75.

Lam, T., & Hsu, C. H. (2006). Predicting behavioral intention of choosing a travel destination. *Tourism Management*, *27*(4), 589-599.

Lella, A., & Lipsman, A. (2016). US cross-platform future in focus. *ComScore. Retrieved from September 22*, 2017.

Leung, X. Y., & Bai, B. (2013). How motivation, opportunity, and ability impact travelers' social media involvement and revisit intention. *Journal of Travel & Tourism Marketing*, *30*(1-2), 58-77.

Litvin, S. W., Goldsmith, R. E., & Pan, B. (2008). Electronic word-of-mouth in hospitality and tourism management. *Tourism Management*, *29*(3), 458-468.

Liu, X., Li, J., & Kim, W. G. (2017). The role of travel experience in the structural relationships among tourists' perceived image, satisfaction, and behavioral intentions. *Tourism and Hospitality Research*, *17*(2), 135-146.

Local, B. (2014). Local consumer review survey.

Mack, R. W., Blose, J. E., & Pan, B. (2008). Believe it or not: Credibility of blogs in tourism. *Journal of Vacation Marketing*, *14*(2), 133-144.

Mariani, M. M., Di Felice, M., & Mura, M. (2016). Facebook as a destination marketing tool: Evidence from Italian regional Destination Management Organizations. *Tourism Management*, *54,* 321-343.

Maslow, A. (1943). Maslow's hierarchy of needs. Index of DOCS/Teaching {sp} Collection/Honolulu. Retrieved from: https://www.researchhistory.org/2012/06/16/maslows-hierarchy-of-needs/

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370.

McDowall, S. (2010). International tourist satisfaction and destination loyalty: Bangkok, Thailand. *Asia Pacific Journal of Tourism Research*, *15*(1), 21-42.

McLuhan, M. (1964). Radio: The tribal drum. *AV communication review*, *12*(2), 133-145.

Munar, A. M., & Jacobsen, J. K. S. (2013). Trust and involvement in tourism social media and web-based travel information sources. *Scandinavian Journal of Hospitality and Tourism*, *13*(1), 1-19.

Nitivattananon, V., & Srinonil, S. (2019). Enhancing coastal areas governance for sustainable tourism in the context of urbanization and climate change in eastern Thailand. *Advances in Climate Change Research*, *10*(1), 47-58.

Parra-López, E., Bulchand-Gidumal, J., Gutiérrez-Taño, D., & Díaz-Armas, R. (2011). Intentions to use social media in organizing and taking vacation trips. *Computers in Human Behavior*, *27*(2), 640-654.

Polo Pena, A. I., Frias Jamilena, D. M., & Rodríguez Molina, M. Á. (2013). Impact of customer orientation and ICT use on the perceived performance of rural tourism enterprises. *Journal of Travel & Tourism Marketing*, *30*(3), 272-289.

Quelch, J. A., & Klein, L. R. (1996). The Internet and international marketing. *Sloan management review*, *37*, 60-75.

Ristova, C., & Angelkova, T. (2018). Social media as tool for promotion of the tourist destination.

Rizky, R. M., Kusdi, R., & Yusri, A. (2017). The impact of e-WOM on destination image, attitude toward destination and travel intention. *Russian Journal of Agricultural and Socio-Economic Sciences*, *61*(1).

Scott, B., Jones, N. G., & Decouz, H. (2012). Global Business Process Management Report.

Sirichareechai, W. (2018). A Study of Electronic Word of Mouth (eWOM) on Tourism Destination Choice: In Context of Religious Tourism Motivation in Pathum Thani Province Thailand. In *Conference: The International and National Conference on Business Administration and Accountancy*.

Suntikul, W. (2013). Thai tourism and the legacy of the Vietnam War. *Tourism and War, Routledge, Abingdon*, 92-105.

Team, S. (2015). Direct and total contribution of travel and tourism to the global economy from 2006 to 2017.

UNWTO (2015). Understanding Tourism: Basic Glossary. Accessed online (May 25, 2015) at http://media.unwto.org/en/content/understanding-tourism-basic-glossary.

Weaver, D., & Oppermann, M. (2000). *Tourism management*. John Wiley and Sons.

Werthner, H., & Klein, S. (1999). *Information technology and tourism: a challenging ralationship*. Springer-Verlag Wien.

Yoon, Y., & Uysal, M. (2005). An examination of the effects of motivation and satisfaction on destination loyalty: a structural model. *Tourism Management*, *26*(1), 45-56.

Zhang, Y., Khan, S. A. R., Kumar, A., Golpîra, H., & Sharif, A. (2019). Is tourism affected by logistical operations and environmental degradation? An empirical study from the perspective of Thailand. *Journal of Cleaner Production*, *227*, 158-166.

Appendices

Appendix 1: Research Questionnaire

SCREENING QUESTION

Are you planning to come to Thailand in the near future?

( ) yes

( ) no

If yes, continue the questionnaire. If no, stop and submit the questionnaire

Dear respondent,

This study aims to examine the use and impact of social media on travellers on travel planning in Thailand. You are humbly requested to give your honest opinion that will help this study. Your participation is voluntary and you can withdraw from the study at any time. There are no right or wrong responses in your responses. Thank you once for agreeing to participate in this study.

SECTION A: BACKGROUND INFORMATION

1. Gender:

( ) Male

( ) Female

2. Age:

( ) Under 15

( ) 15-25

( ) 26-35

( ) 36-45

( ) 46-55

( ) 56-65

( ) 66 and above

3. Level of Education

( ) Primary School

( ) High School

( ) Bachelor's Degree

( ) Master's Degree

( ) Doctoral Degree

4. How many countries have you visited before?

( ) None

( ) 1-5

( ) 6-10

( ) More than 10

5. What is your monthly income?

( ) Less than 15 000

( ) 15001 - 20000THB

( ) 20 001-25 000THB

( ) 25 001-30 000THB

( ) 30 001-35 000THB

( ) 35 001-40 000THB

( ) More than 40 001THB

SECTION B: PERSONAL INTEREST AND EFFECT (POSITIVE OR NEGATIVE) ON E-WOM

1. Personal Interest

The following statements relate to personal interest and measures the level of e-WoM. A five-point Linkert scale (1 = strongly disagree; 2 = disagree; 3 = neither disagree nor agree; 4 = agree; and 5 = strongly agree) is used. Kindly select one that best represents your agreement with the statements.

Statement	**1**	**2**	**3**	**4**	**5**
When I will consider travelling to Thailand, I will ask other people face-to-face for opinions and advice					
I will feel more comfortable travelling to Thailand when I get opinions from people I know face-to-face					

Face-to-face communication with people I know will influences my choice of travel to Thailand					
I will feel more comfortable travelling to Thailand when I get opinions from people I know electronically					
Electronic communication with people I know will influence my choice of travel to Thailand					
When I will consider traveling to Thailand, I will seek opinions and advice online from commercial and independent sources					
I will feel more comfortable traveling to Thailand when I get other people's online travel opinions					
Online opinions will influence my choice of travel to Thailand					
I will not need to talk to others when before I travel to Thailand					
When I will be choosing to travel to Thailand, talking to other people will not be important to me					
I will rarely seek online opinions when traveling to Thailand					
When I will be making travel opinions to Thailand, other people's online will **NOT** important to me					

2. e-word of mouth

Statement	**1**	**2**	**3**	**4**	**5**
To me other people's online travel opinion will be important					
To me other people's online travel opinion will be boring					
To me other people's online travel opinion will be relevant					
To me other people's online travel opinion will be exciting					
To me other people's online travel opinion will mean nothing					
To me other people's online travel opinion will be appealing					
To me other people's online travel opinion will be fascinating					
To me other people's online travel opinion will be worthless					
To me other people's online travel opinion will be involving					
To me other people's online travel opinion will not be needed					

SECTION C: DESTINATION IMAGE

The following statement assesses your perception of Branson as a travel destination. A five-point Linkert scale (1 = strongly disagree; 2 = disagree; 3 = neither disagree nor agree; 4 = agree; and 5 = strongly agree) is used. Kindly select one that best represents your agreement with the statements.

Statement	1	2	3	4	5
Information from social media will depict Thailand as an absolutely a good place					
Many tourists on social media will recommend Thailand as a favourite climate					
We will communicate with each other about our travel experiences to Thailand, which will show a good impression					
I will see people on social demonstrating that the quality of products and services as well as the quality of stay in Thailand will be good					

SECTION D: SOCIAL MEDIA USE

In this section, four social network platforms are selected, that is Facebook, YouTube, Instagram, and Twitter. The section aims at determining the effects of social media on travel intention. Declarations on statements used will also reveal the frequency of your social media usage as your source of information before planning a trip, A five-point Linkert scale (1 = never use; 2 = rarely use; 3 = sometimes use; 4 = use very often, and 5 = always use) is used. Kindly select one that best represents your usage of the platforms.

Items/statements for social media use	1	2	3	4	5
I will use Facebook to get traveling information to Thailand					
I will use Instagram to get traveling information to Thailand					
I will use Twitter to get traveling information to Thailand					
I will use YouTube to get traveling information to Thailand					

SECTION E: TRAVEL INTENTION

For each of the following statements on a five-point Linkert scale (1 = strongly disagree; 2 = disagree; 3 = neither disagree nor agree; 4 = agree; and 5 = strongly agree) is used. Kindly select one that best represents your agreement with the statements.

Travel intention statements	1	2	3	4	5
I expect I will visit Thailand in future					
I will visit Thailand rather than any other tourism destination					
If everything goes as I think, I will plan to visit Thailand in the future					

INVESTIGATING THAI TOURIST'S TRAVELING BEHAVIOR FOR HOT SPRING MANAGEMENT TO PROMOTE HEALTH TOURISM IN CHIANG RAI

Pornpimol Chaisanit [1], Paripan Keawnet[2], Kusuma Tungpruan[3] and Chachaya Yodsuwan[4]
[1,3,4]Hospitality Industry Management Program, School of Management, Mae Fah Luang University, 333 Moo1, Thasud, Muang, Chiang Rai 57100, Thailand
[2]Tourism Program, School of Tourism, Chiang Rai Rajaphat University, 80 Moo 9, Bandu, Muang, Chiang Rai 57100, Thailand
[1]Pornpimol.cha@mfu.ac.th,[2]Paripan.kae@crru.ac.th,
[3]Kusuma.tun@mfu.ac.th, [4]Chachaya@mfu.ac.th

Abstract

There are two objectives in this study ,1) to investigate the travelling behaviors of Thai tourists who are visited hot spring attraction in Chiang Rai ,2) To provide a guideline for hot spring management to promote health tourism in Chiang Rai. This research employed purposive sampling and the sample in this study 400 Thai tourists who visited hot springs in Chiang Rai. The research tools were used questionnaire to collect the data. The statistics of data analysis were descriptive statistics, T-Test and ANOVA. The survey of Thai tourists' behavior visiting hot springs provide valuable information for the hot spring management to develop a policy. The practical guidelines for hot spring management to promote health tourism consists of 4M management :1) Guideline of man management, 2) Guideline of money management ,3) Guideline of material management and 4) Guideline of management. The discussions and conclusions were also provided.

Keywords: Hot spring management, Thai tourists' behavior, Health tourism

Introduction

Recently, the health tourism has been increasingly developing in Thailand. Since economic status and other problems in daily life are key reasons affecting high stress level. For this reason, people seek some kinds of relaxation to escape from the pressure. Health tourism is a good choice for people who avoid stressful life by paying more attention to health improvement (Jutatip, et al.,2021). Thailand as a quality tourism destination combined with data from Global Wellness Tourism found that, in 2020. Thailand is ranked the 13th in the world with an income more than 400 billion baht (Tourism Authority of Thailand, 2019). In addition, Thailand has the benefit of strength on the service operations. For example, people are friendly and gentle with patients, this creates a good impression for tourists (Orapin et al., 2015). Thailand has many hot springs for health tourism, the most famous ones being in Northern Thailand. Chiang rai is the most attractive place to promote heath tourism, particularly for those Thai tourists who have special interests in improving their health, body, and mind. The number of tourists visiting Chiang Rai was 2.7 million and the revenue earned 30,000 million baht in 2019 (Tourism Authority of Thailand, 2019). There are more than 10 hot springs in Chiang Rai. Travel and hospitality businesses in hot spring are attracted to the tourists, such as spa business, food and beverage business, accommodation business, souvenir shop, tour companies and other business. This business also helps create jobs and income for the nearby community. Thus, it is important for driving the province's overall economy with health tourism (Ngamnid et al., 2021). The record number of Thai travelers coming to Chiang Rai has brought about some contemporary mixed emotion for locals to offer the best service that would leave a lasting impression and attract many visitors

According to Weerasak (2012), hot spring were a valuable resource for tourism. If it is not developed or lacking good management, it will eventually decline and destroy. From the studies in the past found that services and activities based on hot springs, were about nature exploring, recreation, traditional massage and food and beverage services. There has been investment made in the travelling and communication infrastructure by the government in order to satisfy the need of the large number of tourists. Educational program and training have been updated to ensure that the travelers feel welcome and secured. Moreover, Thai tourists can gain extra benefit in purchasing a standard item of services and products in hot springs. With regards to the services and product arranged to support hot spring tourism all things need to be ensured that the events taking place meet the well-being and health of the locals as well as the travelers (Korawan et al.,2021). Understanding Thai tourists' behavior would be useful in designing tourist products and services to better attract and serve their needs. The benefit and importance of management of the hot springs should meet the satisfaction of tourists. Therefore, this research has studied Thai tourists' behavior in hot spring tourism sector and provide the practical guidelines for hot spring management to promote health tourism in Chiang Rai.

Research objectives and questions

The objective of this research is to investigate the travelling behaviors of Thai tourists who are visited hot spring tourism sector in Chiang Rai. In addition, this study also provides a guideline for hot spring management in Thailand. To achieve the objectives of this research, the following research question was developed to address this research study:

1. What are the demographic factors that affect the main objective of visiting hot spring?

2. What are the traveling behaviors of Thai tourist in hot spring tourism?
3. What are the practical guidelines for hot spring management to promote health tourism?

Literature review

Tourists behavior

According to Solomon (1996) mentioned that consumer behavior as referring to any process that involves the use of individual or group, and the use and management of goods and services and the ideas or experience to meet their own needs. Furthermore, Hudson (2008) explained that the factors influencing tourists' behavior 7 dimension as follows. 1) Motivation is driven from within the people to act or behavior to satisfy their need to understand the motivation of tourists will give operators a competitive advantage 2) Age and gender market segmentation used in the present age is the major tour companies 3) Lifestyle analysis will consider the lifestyle of the individual allocation of time , money and energy but we need to think about lifestyle along with demographic and psychological factors such as activities ,interests and opinions 4) Life cycle refers to the duration of the life cycle and age of the family member 5) Cultural refers to norms beliefs and rituals that were unique to each individual to determine their needs and behavior 6) Social class refers to the place where a person lives in society such as income ,wealth ,education ,occupation ,family status, value of housing and location and 7) Reference group means a group that directly or indirectly influences the attitudes or behaviors of individuals such as families, education institutes and others.

Health tourism

Health tourism is a tourist trip to visit beautiful places in natural and cultural attractions as well as to learning the way of life and leisure by divided the time of travel to promote health and therapy activities. There are two types of health tourism

1. Health Promotion Tourism is the promotion of travel to visit tourist attractions in beautiful natural attractions and cultural education, lifestyle and recreation, by splitting from the tourism part in health- promoting activities, accommodation and hotel for quality standard such as massage, steam with herbs, bathing, water therapy, healthy food and beverage, meditation, yoga, beauty service and recreation.
2. Health healing tourism is traveling to visit beautiful sights in the tourist nature and culture and learning lifestyle and recreation, and part of time to travel to get treatment service and health and medical, health care in hospital or nursing home quality standard such as treatment of various dental and health care of teeth.

In this research, we will focus on health promotion tourism for hot spring tourism sector because Thai Tourists recently want to take care of their health and lifestyle by arranging their time to hot spring baths, travel to relax and detoxifying both body and mind after work.

According to Varinnar and Kanokkarn (2019) also mentioned that the main objective of visiting health tourism destinations is also affected by the tourists' demographics profile, such as gender, age, and income. Wanna (2003) and Weerasak (2012) further pointed out that hot spring is famous for health tourism for domestic tourists in Thailand. The factors that tourists concern before traveling to health tourism are 1) The place should have a beautiful natural environment, clean and no pollution 2) safety and security is required for tourists (Boonler ,2006). 3) staff needs to have knowledge and experience in physical and mental health, and they are willing to help tourists all the time. Hot springs will be success depends on the availability of a highly qualified and trained staffs (Lee and King,2008). 4) they should have many recreation activities for developing of physical and mental health and 5) tourists get benefit from learning local culture and getting knowledge to develop a better quality of life.

Hot spring management

Hot spring, also called thermal spring, is spring with water at temperatures greatly higher than the air temperature of the surrounding area. Most hot springs discharge groundwater that is heated by shallow invasions of magma in volcanic areas. Some thermal springs, however, are not linked to volcanic activity. In such cases, the water is heated by convective circulation: groundwater straining downward reaches depths of a kilometers or more where the temperature of rocks is high because of the normal temperature gradient of the earth's crust about 30°C (54°F) per kilometer in the first 10 km (six miles) (The Royal Institute, 2001). There is good memorial to enjoy experiences in winter time in the mountains of northern part of Thailand than a dip in a natural hot spring. Thailand's hot springs are found in some of the country's most spectacular landscapes and provide visitors with the perfect balance of relaxation and beautiful natural attraction (Nipon,2016).

There are 96 hot springs developed for tourism in Thailand. In Northern of Thailand, there are 12 hot springs in Chiang Mai, 10 hot springs in Chiang Rai, 8 hot springs in Mae Hong Son, 2 hot springs in Lampang, 2 hot springs in Phrae, 2 hot springs in Nan. (Tatsuo, 2017). Furthermore, Hot springs can be divided into four management types. (Chuamuangphan, 2016; Tatsuo, 2017; Department of Mineral Resources, 2021) as follows: 1). A hot spring owned and managed by the government; these hot springs are located in the national park. The distinctive highlight of the hot springs located in the national park is that they are natural and abundant natural resources. It is in harmony with the surrounding forest conditions and seems to be a one-stop attraction for people of all ages. There are many national park activities for family visitors, young visitors, female visitors, elderly visitors, such as hiking, Thai massage or spa, restaurant, souvenir shop, accommodation and camping as well as organizing several leisure activities. These types of hot springs are worthwhile, charming and value for visiting although accessibility is sometimes difficult and relatively remote to other linked attractions and local business (Arissara and Gulapish,2015). 2) A hot spring that is privately owned and managed by the private sector: the notable feature of private hot springs is the privacy and calmness due to the low number of tourists compared to other hot springs. They are pleasant with hot springs with a special and comprehensive service and good one stop service, which is often located near the main hot springs or tourist routes. 3). Community-owned and managed hot springs; the distinctive quality is the local value, with a diversity of cultures, local lifestyles, as well as traditions or traditions in each local community that tourists will experience. The surrounding environment is local, natural, and also has accommodation or homestay to provide tourists. A small number of tourists travel to the hot springs in the community. (Liaorungruang, 2012). This community-owned and managed hot springs can be divided into 2 types which is community-owned and managed hot springs (Ngamnid et al.,2021). with 100% community management, and a hot spring that receives a budget from the sub-district administrative organization along with a community management (Pichayakul, 2020) 4). Co-managed hot springs between two parties; in Chiang Mai, such as San Kamphaeng hot springs, Mae On district (it is co-managed between government and community). This type of management tries to increase the management ability to be more flexible and can generate good profits. The businesses in hot spring attraction areas must consider the various feature of each hot spring to make the best financial outcome.

The management of Hot Spring can also use 4M theory (Man, Money, Material and Management) which is from theory of economics with production management theory by Man refers to the operator of organization, Money means the cost of an organization, Materials mean equipment various appliance throughout the building and premises. In terms of tourism, materials can be products and service. Management means the business management such as process of marketing, production process and service process (Drucker ,2012)

Research methodology and data collection

This research is quantitative research that used questionnaires. The population and sample group are the Thai tourists in Chiang Rai that visited and used service in hot springs. The sample group was chosen by purposive sampling. The sample size was calculated using W.G Cochran's unknown population formula (1977) and a reliability value at 95% with the margin of error at 5%. The sample group consisted of 385 Thai tourists, but the actual data collection had obtained all 400 complete questionnaires. The questionnaire contained of the following questions:

1. Statistical profiles of tourists
   Gender, Age, Monthly income

2. Statistical tourist Behavior
   -Main objective of visiting
   -Form of travel
   -Source of information
   -Travel Preferences
   -Persons traveling with
   -The number of times to visit this hot spring a year
   -Average spends on services in hot spring
   -Activity prefers in hot spring

Research findings

Thai tourists behavior

The results based on collecting questionnaires are as followed:

Table 1 Gender

Gender	Total	Percentage
1. Male	155	38.75
2. Female	245	61.25
Total	400	100.00

The analysis of the gender of Thai tourists who came to hot spring sites showed that 61.25% was female and 38.75% was male.

Table 2 Age

Age	Total	Percentage
1. Below than 20	11	2.75
2. 21-30 years old	92	23
3. 31-40 years old	107	26.75
4 .41-50 years old	104	26
5. 51-60 years old	53	13.25
6. More than 60 years old	33	8.25
Total	400	100.00

The analysis of the age group of Thai tourists who came to hot spring sites showed that the age of respondents in 31-40 years was the highest at 26.75% followed by the age of respondents 41-50 years for 26%, 21-30 years for 23%, 51-60 years for 13.25%, more than 60 years for 8.25% and below than 20 years for 2.75% respectively.

Table 3 Monthly Income

Monthly Income	Total	Percentage
1. Below than 5,000 THB	63	15.75
2. 5,001-10,000 THB	68	17
3. 10,001 – 15,000 THB	77	19.25
4. 15,001-20,000 THB	54	13.5
5. 20,001- 25,000 THB	34	8.5
6. 25,001-30,000 THB	34	8.5
7. More than 30,000 THB	70	17.5
Total	400	100.00

The analysis of the monthly income of Thai tourists who came to hot spring sites showed that the income of respondents between 10,001-15,000 THB was the highest at 19.25% followed by the income of respondents more than 30,000

THB for 17.5 %, income between 5,001-10,000 THB for 17%, below than 5,000 THB for 15.75 %, 15,001 -20,000 THB for 13.5%, 20,001-25,000 THB and 25,001 – 30,000 THB for 8.5% respectively.

Table 4 Main objective of visiting

Main objective of visiting	Total	Percentage
1. To relax	247	62
2. To improve health/mind/body	70	17.5
3. To admire the beautiful nature and landscape	25	6.25
4. It is an opportunity to be with your family	43	10.75
5. Educational trip	3	0.75
6. To visit relatives and friends	12	3
Total	400	100.00

The analysis of percentage of main objective of traveling, most of the respondents intended to travel to the hot spring for relax, accounted for 62%, followed by improving health with 17.5%, for an opportunity to be with family 10.75%, for admiring the beautiful nature and landscape 6.25% and visiting relatives and friends 3%, respectively.

Table 5 Form of travel

Form of travel	Total	Percentage
1. Private Car	308	77
2. Motorbike	71	17.75
3. Bus	1	0.25
4. Rental Van	20	5
Total	400	100.00

The results of the data analysis, the percentage of travel form was found the private car was 77 %. Followed by motorbike was 17.75%, rental van was 5% and bus was 0.25% respectively.

Table 6 Source of information

Source of information	Total	Percentage
1. Friends and Relatives	340	85
2. Advertising (Television, Radio)	3	0.75
3. Travel Magazine	6	1.5
4. Travel Agency	2	0.5
5. Brochure	0	0
6. Internet	36	9
7. Signboard	13	3.25
Total	400	100.00

The analysis of percentage of source of information about hot springs found that 85% know from their friends and relatives. Followed by 9 % for internet, 3.5 % for signboard, 1.5% for travel magazine, 0.75% for advertising, and 0.5% for travel agency respectively.

Table 7 Travel Preferences

Travel preferences	Total	Percentage
1. Non-festival days	91	22.75
2. Saturday – Sunday	239	59.75
3. Public Holiday /Long Weekend	70	17.5
Total	400	100.00

Based on their travel preferences, 59.75% of tourists chose to take a trip on Saturday and Sunday. 22.75% chose to travel on the non-festival days and 17.5% travel on public holiday or long weekends.

Table 8 Persons traveling with

Persons traveling with	Total	Percentage
1. Come alone	57	14.25
2. Come with friends	95	23.75
3. Come with family	242	60.5
4. Come with travel agency	4	1
5. Come with company	2	0.5
Total	400	100.00

The analysis of percentage of persons traveling with found that 60.5% came with family. Followed by 23.75 % came with friends, 14.25 % came alone, 1% came with travel agency and 0.5% came with company.

Table 9 The number of times to visit this hot spring a year

Time of visiting	Total	Percentage
1. Come first time	67	16.75
2. 2-3 times	93	23.25
3. 4-5 times	37	9.25
4. More than 5 times	203	50.75
Total	400	100.00

The analysis of percentage of visitors who visited to the hot springs in a year found that respondents traveled more than 5 times a year 50.75%. Followed by 2-3 times a year 23.25%, came first time 16.75 % and 4-5 times a year 9.25%.

Table 10 Average spends on services in hot spring

Spending money	Total	Percentage
1. 1-500 Baht	318	79.5
2. 501-1000 Baht	65	16.25
3. More than 1000 Baht	6	1.5
Total	400	100.00

The analysis of percentage of the cost of spending on service in hot springs found that 79.5 % spend 1- 500 baht, followed by 16.25% for 501 – 1,000 baht and 1.5% for more than 1,000 baht respectively.

Table 11 Activity prefers in hot spring (Respondents could choose more than 1)

Activities	Total	Percentage
1. Hot spring bathing	369	92.25
2. Massage	129	32.25
3. Steam with herbs	66	16.50
4. Yoga	8	2.00
5. Meditation	19	4.75
6. Nature visit/taking walks	48	12.00
7. Shopping souvenir beauty product	37	9.25
8. To eat healthy food & beverage	112	28.00
9.Exercise	44	11.00

The analysis of the percentage of activity tourists wanted to do in hot springs, most of the respondents intended to do bathing which accounted for 92.25% , followed by massage with 32.25% , for eating healthy food 28% ,for steam with herbs 16.5 % , for nature visit 12%, for exercise 11% , for shopping souvenir beauty product 9.25 % and yoga 2% , respectively.

In this research, T -test and ANOVA were also employed to investigate if there any significant differences in the tourist's gender, age, and monthly income for the main objective of visiting hot springs. The results were explained as from table 12 to 14 as follows:

Table 12 The main objective of visiting by gender for Thai Tourists (T-Test)

Variables	Male			Female			T	df	Sig.
	N	Mean	Std. Dev.	N	Mean	Std. Dev.			
Main objective of visiting	155	1.81	1.249	245	1.80	1.292	0.049	398	0.798

*$p < .05$

Regarding results of the study from a table of differences between males and females, or genders, no significant difference was found for gender at level 0.05

Table 13 The main objective of visiting by age for Thai Tourists (ANOVA)

Variables		Sum of Squares	Df	Mean Squares	F	Sig.
Main objective of visiting	Between Groups	27.244	5	5.449	3.426	0.005
	Within Groups	626.693	394	1.591		
	Total	653.937	399			

*$p < .05$

Regarding results of the study from a table of differences between age and the main objective of visiting in hot springs, there is a significant difference was found for age at level 0.05.

Table 14 The main objective of visiting by monthly income for Thai Tourists (ANOVA)

Variables		Sum of Squares	Df	Mean Squares	F	Sig.
Main objective of visiting	Between Groups	128.594	5	25.719	6.466	0.000
	Within Groups	1567.156	394	3.978		
	Total	1695.750	399			

*$p < .05$

The results of ANOVA test, shown in Table 14, indicated that there is a significant difference was found for monthly income at level 0.05.

The guideline for hot spring management to promote health tourism

Hot spring tourism focuses on health promotion because Thai Tourists recently want to take care of their health and lifestyle by arrange the time to exercise, travel to relax and detoxifying both body and mind after work (Weerasak,2012).

The results of the demographic information from the total number of respondents were 400 found that most Thai tourists were female and age between 31-40 years in this research.

The results of tourists' behavior showed that the purpose of visiting is to relaxation 62%, followed by improvement body and mind 17.5% and taking opportunity to be with family 10.75%. Most of visitors prefer to travel by their own car 77%, and they knew the source information of hot spring tourism by their friends and relatives 85%, followed by internet 9%.

Thai tourists chose to take a trip on Saturday and Sunday 59.75%. Most of tourists came with their family 60% and 14.25% came alone. Most of them visited hot springs more than 5 times a year and spent around 500 baht for service in hot spring sites. Furthermore, they prefer to bathing for 92.25%, massage for 32.25%, and for eating healthy food for 28%. Moreover, there is no significant difference in gender for the main objective of visiting hot spring. Meanwhile, there are significant differences in age and monthly income for the main objective of visiting hot springs.

For the practical guidelines for hot spring management to promote health tourism should have a guideline by using the 4M theory (man management, money management, material management and management) which is a theory of economics with production management theory (Drucker,2012). The four guidelines of hot spring management are as follows:

1) Guideline for man management
The management of hot spring needs to plan a manpower during weekends because Thai tourists prefer to visit hot spring during this time. Hot spring needs to plan a manpower and job responsibility of each position. They might have to increase the number of temporary staffs to hire during weekends. Management team also needs to develop skills of staff by training of safety and security (Wanna ,2003) and (Weerasak ,2012). For example, they should provide first aid training to take care of tourists' safety while accessing the Hot springs service. Moreover, staffs need to have knowledge to recommend service in hot springs. For instance, they can give information about hot spring bathing, massage and where to eat healthy food and drink in hot spring sites.

2) Guideline for money management
The service fees should be appropriate for tourists include bathing, massage, food and drink, souvenir. Management team should adjust the service rate appropriate for goods and products in hot springs. Food and beverage, souvenir, other activities price should be reasonable for tourists. Hot springs should promote local healthy food and drink to make the tourist satisfied or cooperate with local restaurant that can provide local health food. Additionally, tourists would be impressed by the wide availability and variety of local cuisine. The utilization of authentic health food would add value to the hot springs' tourism experience (Varinnar and Kanokkarn,2019).

3) Guideline for material management
The hot spring management should provide the most efficient use of tourist materials. They should plan for maintenance budget to install equipment for safety and security. The results of the research revealed that tourists prefer to have hot spring bathing and steam with herbs. Thus, management team provides emergency lighting in the private rooms, ring signal and warning sign. for rules and regulation in hot spring. In addition, hot spring should provide a first aid kit, sign for rule and regulation to make tourists who come to use service understand and follow the rule strictly. Safety and security are very important and required for tourists in hot spring tourism (Weerasak,2012).

4) Guideline for management in hot springs
Based on the research results showed that Thai tourists travel by their own car, and they prefer to take a trip with their family on weekend. Thus, hot spring team need to have adequate parking for tourists especially on weekends. In case the parking area is not enough, staffs should contact local community to find parking area and pay for them. The results of tourist's behavior also showed that the different age of tourist have different

purpose of visiting. The elderly person might want to visit for improving body and mind. Meanwhile, businessperson might want to relax and admire the beautiful nature. Therefore, hot spring need to know and understand what customer wants. In addition, hot springs emphasize on beautiful decoration, planting local flowers and trees. Tourists can sit and relax under trees. According to Wanna (2003) and Varinnar and Kanokkarn (2019), the hot spring tourism sector should have a beautiful natural environment, clean and no pollution for attract the visitors. Tourists and their family should have many recreation activities for developing of physical and mental health.

In terms of marketing, the results found that different monthly income have different effects on the purposing of visiting. Thus, hot springs need to create a variety of travel packages offer Thais' tourist. The high-income customers might enjoy private hot spring baths to improve health and body. Furthermore, most of tourists know the source information of hot spring by their friends and relatives and internet. Hot springs should promote their destination by using various online media such as Facebook, YouTube and Instagram. In addition, the results of research indicated that most of tourists spent around 500 baht per time for services in hot spring. Hot spring should create product package for tourists. For instance, one private room (includes towels, amenity kit) and get one hour for Thai massage pay total 500 baht.

Conclusion and discussion

The objectives of this research were to investigate the travelling behaviors of Thai Tourists who are visited Hot Spring Attraction in Chiang rai. The researchers also provide guidelines for hot spring management to promote health tourism in Thailand. This study adopted 4M theory this study. This research has produced several information insights with potential to enhance the competitiveness of the hot spring sector. Firstly, the different demographic factors in age, and monthly income affect the purposing of visiting the hot spring with a statistical significance level at 0.05. The different gender does not influence the purpose of visiting hot springs, with a statistical significance level at 0.05. Secondly, it has been found that hot spring's staffs are important factors in driving the hot spring management for health tourism. The hot spring management should provide staff training by the trainers or expert from external organizations, so staffs can provide superior service to tourists. The hot springs tourism is a service-oriented industry, and its success depends on the availability of a highly qualified and trained staffs (Lee and King,2008). Thirdly, money management is necessary in hot spring management. The price of hot spring service fees should be appropriate for tourists. Management team must control the suitable price of food and drink, massage, hot spring baths, and souvenir. The government that are responsible for supervising Health tourism destination, natural hot springs should adjust the service fees appropriately for goods and services in hot spring sites (Arissara and Gulapish,2015). Fourthly, the hot spring management should provide the most efficient use of tourist materials.

Management team should improve the safety and security. They must set up emergency lighting in the private rooms, ring signal and warning sign for rules and regulation in hot spring. According to Varinnar and Kanokkarn (2019), the facility in the hot spring is very important to promote health tourism destination because tourists are concerned about their safety. Referring to Boonler (2006) said that tourists decide to choose a health tourism destination with regards to safety and security. Finally, hot spring team need to have adequate parking for tourists especially on weekends and promote their destination by using various online media such as Facebook, YouTube and Instagram. In conclusion, hot springs were a valuable resource for health tourism. A good management is very important to meet the satisfaction of tourists in hot springs. Understanding Thai tourists' behavior would be useful in designing tourist products and services to better attract and serve their needs.

Managerial implication

As for managerial implications, the finding from this research recommended that the hot spring management team needs to adjust products and services to meet the needs and expectations of Thai Tourists. Importantly, hot springs must provide staffs at all levels with skills and knowledge in service. Staffs are valuable assets to deliver products and services to customers. Thus, hot spring management team should provide staffs with various form of supports to keep Thai tourists 'satisfaction.

Future research

Future research should study the other factors effecting the service and management such as service innovation and sustainable development in hot springs as well as the study of the business in hot springs in the other cluster in Thailand.

References

Arissara,H & Gulapish,P.(2015). The guidelines for developing Hot Spring Resources in Health Tourism Destination Management, 16(3), 76-90.

Boonler,J .(2006). Tourism development and conservation. Bangkok: Press and Design

Chuamuangphan,N.(2016). Health tourism management model in the type of tourist attraction Hot water in the western region of Thailand. The 8th National Academic.

Cochran, W. G. (1977). Sampling techniques (3rd ed.). New York: John Wiley & Sons.

Department of Mineral Resources. (2564). Hot Spring in Thailand. Retrieved 1 March 2022, from https://www.dmr.go.th/n_more_news.php.

Druker,P.F.(2012). The Practices of Management. New York: Routledge.

Hudson,S. (2008). Tourism and Hospitality marketing: a global perspective

Jutatip,J.,Arin, N., Angsumalin,J & Nattapat,M.(2021). The Potential Development for business of Hot Spring to Support Health Tourism and High Value Service based on Community Resources for Community Involvement Tourism management in Mae Sort, Tak Province. *Journal of Psychology and Education, 58*(3), 4133-4139.

Korawan, S.,Pachernwaat,S. & Ravee,P.(2021). Examining Chinese Tourists' Traveling Behavior Engaged with cultural tourism in Thailand. *UTCC International Journal of Business and Economics,13*(2), 41-52.

Liaorungruang , A. (2010). Behavior of Thai Tourists travelling to San Kamphaeng Hot Spring in Chiang Mai Provinces.Master of Economic Thesis, Chiang Mai University

Lee, C & King, B. (2008). Using the Delphi method to assess the potential of Taiwan's hot springs tourism sector. *International Journal of Tourism Research, 10* (4). pp. 341-352.

Ngamnid, S., Warach, M., Prakobsiri, P.& Phatpitta, S (2021). Economic Returns to Travel and Hospitality Businesses in Hot Spring Attraction Areas in The Upper Northern Provinces of Thailand .*AU-GSB e-Journal, 14* (2), 93-102.

Nipon,C. (2016). The Potential of Hot Spring in the Western Thailand for Health Tourism and Sustainability. *Economics Word*, *4*(4),147-156.

Orapin, C., Ploykanok,K., Suwapas,A. Kulteera,T., Jutamas,R & Piangpis,S.(2015). Guildelines on Health Tourism Management for Middle Eastern Tourists in Phuket Province. *Procedia Computer Science*.1146-1153

Pichayakul, P. (2020). A Study of Japanese Living in Chiang Mai's Opinions in Enhancing San Kamphaeng Hot Springs Components of Tourism. *International Thai Tourism Journal*, *16*(1), *1-28.*

Solomon, M.R. (1996). Comsumenr behavior. Englewood Cliff, NJ: Prentice -Hall.

Tatsuo, U. (2017). Hot Spring in Thailand.Presented at the 7th Benjamitra Network National & International Conference on from Sufficiency Economy to Sustainable Development

The Royal Institute. (2001). Hot Spring. Bangkok: The Royal Institute.

Tourism Authority of Thailand. (2019). TAT Successfully organise Amazing Thailand Health and Wellness 2020. Retrieved 10 March 2022, from https://www.tatnews.org/2020/12/tat-successfully-organises-amazing-thailand-health-and-wellness-2020/

Tourism Authority of Thailand. (2019). Chiang Rai .Retrieved 10 March 2022, from https://www.tourismthailand.org/Destinations/Provinces/Chiang-Rai

Varinnar,S & Kanokkarn,K.(2019). Hot Spring Management for Health Tourism in Thailand. *Suthiparithat Journal*, *33* (105), 1-14

Wanna,W.(2003). Tourism Geography (2nd edited). Bangkok: Thammasat University Press.

Weerasak, U. (2012). Community Participatory Action Research for Hot Spring Tourism Development in the Western Thailand. Bangkok.

UTCC International Journal of Business and Economics (UTCC IJBE)
Volume 13 Number 3, December 2021

THE FACTORS WHICH AFFECT PEOPLE SHARING KNOWLEDGE IN CHINA ONLINE FERTILITY HEALTH COMMUNITY

Zijun Ye
International School of Management, University of the Thai Chamber of Commerce, 126/1 Vibhavadi Rangsit Rd., Dindang, Bangkok 10400, Thailand
249815934@qq.com

Abstract

With the development of information technology, many people search and seek a solution through Internet, especially in health issue. People tend to ask question in online health communities or search for the knowledge shared by others who have same experience with them. When they come into specific healthy problems, they know where to find supporter and who is capable to make suggestion for them before they make the decision.

Virtue community's members should be aware of that if they can receive some money reward or business opportunities according to their sharing, it would encourage them for keep doing it better. There are two kinds of benefits, one is extrinsic and the other one is intrinsic (Kankanhalli et al., 2005). No matter what benefit it is, people tend to be more willing because of what they earn from. Other benefits can be classified by respect, reputation, self-satisfy and so on, and the more they can benefit, the more positives for them to share knowledge (Bock and Kim, 2002).

This study develops a structure and is designed to explain and analyze the relationships between contextual factors, such as, perceive related advantage, perceive compatibility, community loyalty and personal factors, self-efficacy, interpersonal trust, and norm of reciprocity with knowledge sharing behaviors.

Keywords: knowledge share, online health community, and personal factors, self-efficacy, social cognitive theory, interpersonal trust, perceive related advantage, perceive compatibility and community loyalty.

Introduction

The significance of this research is to study what is process of knowledge sharing and why individual share their knowledge in online health community voluntarily to contribute others. Which factor can motivate individual knowledge sharing and what is the expected outcome they are looking for. How people build up mutual reciprocal through the whole procedure. Most couples that suffering infertility are decided to get information support from Internet. A large research indicated that if patient gain more knowledge and skill during the process of treatment it can improve their ability to manage self-care, enhance decision-making and improve the quality of life.

Knowledge learner in health community can make cost-effect decision through others experience sharing, they get benefit from people who is sharing, knowing that whole treatment process, what kind of medicine would most useful, what others reaction when they are in the same situation, relieve their concern by getting social support to deal with their health problem.

We used social cognitive theory to contractual a model to research the motivations for people sharing knowledge in online health community. From the perspective of context factors and personal factors. Contextual factors can be classifying as most important two parts, which is the norm of reciprocity, the other part is interpersonal trust. Personal factors included self-efficacy, relative advantage, perceived compatibility. And we gather almost 400 questionnaire and used multiple regression analysis to get the conclusion that interpersonal trust, Self-efficacy, Perceived compatibility advantage has a positive relationship to knowledge sharing behavior. Knowledge sharing behavior has a positive relationship to community loyalty.

Problem statement

With the second child policy was formulated in 1, January 2016, a lot of people joining the trend by having the second child. But there are some reasons cause their infertility especially for 70’s generation whose ages are around forty. Many couples consider clinically infertility when they processing regular unprotected sexual activities at least one year but still cannot pregnancy. This kind of private issue cannot be communicated between friends and colleagues and family, so they either go to find doctor or search information and seek support from online health community. Since that the meeting time with doctor is very limited and there is always long queue in hospital, they need to make an appointment three to four days ahead, some region for specific doctor even make an appointment one-month advance, otherwise they cannot accept treatment.

Some health issues may be too private for people to ask help from their families or relatives or friends, such as infertility. In particular, individuals who face infertility problem don’t admit it because they are afraid of others would look down and isolate them, so it is hard to make people who have similar experience understand and mention it in front of public communication (Wright and Bell, 2003).

Another problem is when patient leave the doctor's office they still have unanswered question in mind, so it cost much time and energy to get help from doctor with dissatisfaction. Those unanswered question can be found in online healthy community and people can found related information through others knowledge sharing with similar experience. They can be satisfied by the explanation of the treatment process or medicine guideline by other patient sharing their knowledge base on their experience that costly and valuable.

Research objectives

The objective of this study is to select important factors according to knowledge sharing from social cognitive theories and increase the possibilities for users who are actively engaging in knowledge-sharing behaviors in online health community. As we know that knowledge sharing behaviors are likely to be affected not only by individual motivations but also by contextual factors like the outside environment forces (Yoo and Torrey 2002)

The objective of this study is as follows:

1. Which factors can affect people sharing knowledge in online health community?
2. Evaluate the relationship between these factor and knowledge sharing process;

The benefit of the study is to find out which factor can affect people sharing their knowledge in online community and how to improve their online behavior to let people make decisions at a cost-effective way. People who share their knowledge in community can improve the process for knowledge learner, especially for fertility couple to learn knowledge related to advance technic and treatment process before seeing doctor and make communicate with doctor more efficiency and solve their real problems. It can also reduce their concern for a lot of uncertain things and some gynecology issues, which is common seen in fertility women.

It can also contribute to the efficient communication between doctors and patients, because the more knowledge that patients can learn from others online, the easy way that they can be corporative with specialists and have a more normal attitude to face specially infertility problems such as irregular menstruation, polycystic ovarian syndrome and so on.

Literature review

Firstly, find out the definition of knowledge sharing behavior, what is the process and what is the definition of related factors that would affect knowledge-sharing behavior. And the literature review for what is the factors affecting people knowledge share behavior online, and what is the result of the relationship between each factors and knowledge sharing behavior. And what is the characteristics for online health community and how individual performance in community. Secondly, we use social cognitive theory to analyze the relationship between each factor to knowledge sharing behavior. What is the definition of social cognitive theory? According to the research, we select some factors to be the most important factors related to knowledge sharing behavior. Thirdly we give the explanation to each factor and list out the hypothesis.

Theory framework

According to Chiu, Hsu and Wang, (2005), they integrated social cognitive theory to contractual a model to research the motivations for people's knowledge sharing behavior in online health community. Social cognitive theory has been used in a lot of previous study to analyze knowledge-sharing behavior in the context of online community (Lin, Huang and Chen, 2009; Hsu, Ju and Chang, 2007). Social Cognitive Theory (SCT) can be classified into two sections. First one is a contextual factor and the other one is person's cognition. It is indicated that individual's behaviors can be sharpened through his or her own cognition. It is the base or the fundamental of our action. Personal determinism emphasizes the internal psychological factors on the regulation and control of behavior, environmental determinism emphasizes the control of external environmental factors on behavior.

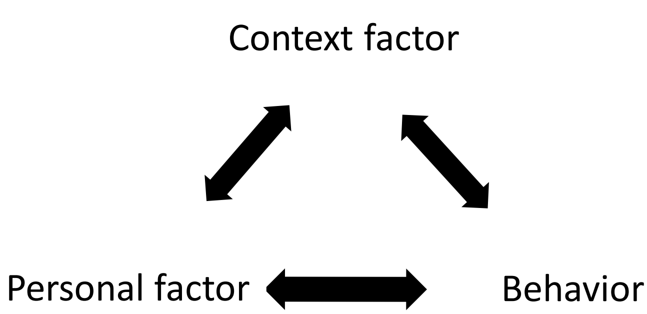

Figure 1 Social cognitive theory

Contextual factors

Contextual factors can be classifying as most important two parts, which is the norm of reciprocity, the other part is interpersonal trust. Norm of reciprocity and trust are two of the important factors that affect knowledge sharing in Davenport and Prusak's (1998) view.

Norm of reciprocity

The norm of reciprocity means that people in community trust if they help others solve their problems they would also get help from others in the future and trust that drive people knowledge sharing behavior. The norm of reciprocity usually refers to a series of rules that apply by organizing members and it is their obligation to follow it in order to have sustainable development (Wu et al., 2006).

Interpersonal trust

Trust is a key element for users to join in and build up a relationship with other members in online health community. Trust refers to members who feel confident for the quality and reliability of the content and personal relationship in online health community. (Zhao, J., Ha, S., & Widdows, 2013)

Interpersonal trust is an important factor that encourages people to have the attitude toward sharing their knowledge through Internet. It maintains mutual good exchange relationship. The strong interpersonal trust the more likely people would seek, collect, exchange and share knowledge in community. (Chen, Hung, 2010) Interpersonal trust is critical to predict interpersonal knowledge sharing in the organization. Trust between two individuals may create an atmosphere that boots knowledge sharing in a particular social context. Nonaka (1994) Trust among individuals is the foundation for interpersonal ties, which is important context factor for facilitating knowledge share behavior.

Personal factors self-efficacy

Personal factors included self-efficacy, how much confident for people when they come to difficulties and uncertain problems, they enforce learning capability from others and keep challenge and overcome difficulties. In their self-learning system, they also enhance their ability in knowledge sharing to help others or to be more positive to influence (Lin, 2009). Knowledge sharing self-efficacy shows one has capability to offer valuable knowledge to others and confident in his or her skill to answer to the questions posted by other members. People with high self-efficacy would be more likely to perform knowledge sharing compare with those with low self-efficacy. (Chen, Hung, 2010)

Perceived relative advantage

Relative advantage is a measure of the degree to which an action provides more benefit than its precursor. Perceived relative advantage in our study is what likely advantage and benefit can members get through knowledge contributors share behavior, such as less costs to problem solving and get more useful information efficiency. For example, in IVF procedure, patient care about total costs which need to be paid, what medicine should be intaken to improve quality of their result, how long for the whole process, what is the technique behind IVF. What is side effect of some drug or medicine usage? How to make recover after surgery? How to react when feeling uncomfortable? Apart from this some patients who have already gone through this procedure would share their personal experience or mistake to remind others to prevent performed some situation, which is advantageous for those who want to learn something from real cases when it needs to make decision in some problem (Chen and Hung, 2010).

Perceived compatibility

Perceived compatibility refers to the degreed to online users perceived knowledge share behavior to match their individual exist needs and values. In our study, perceived compatibility refers to the knowledge contributors' hold the likely value like try every method to have a healthy baby, and need like how to get help and guideline for their specific problem, and experience like how knowledge share behavior educated them and help them to make the cost-effective decision (Chen and Hung, 2010).

The time for patients to meet with doctor face to face is very limited since the amount of patients is much more than the amount of doctors, so the resources for the professionals are much limited, and it reaches the result that when patients leave the doctors' office, they still have a lot of question which maybe come from treatment or some uncomfortable syndrome after entering the cure center that still need to be replied. But when it comes to online health community it can produce more effective activities which can provide sufficient opportunities for them to share their felling and find out the solution from individual who have the same problem with them or even worse case. Online health community provide the cognitive and affective value determine by goals, activities, actors and independencies. (Sarah Van Oerle, 2016).

Knowledge sharing behavior

Knowledge sharing is involved in providing source of knowledge, interpretation and communication within two or more participant, and knowledge sharing is a process of communicated which is involved in two or more people to participant and for one side sharing is knowledge provider also call knowledge output. It is the process of creating new knowledge. For the other side receiving is knowledge obtainer which also call knowledge input. It is the changing program in terms of knowledge. Through the media that is online health community or social media. (Usoro, Sharratt, Tsui and Shekhar, 2007)

There are six motivators for individual sharing knowledge in online community, which is promise and obligate to the group, reciprocity, altruism, ease access to technology, personal gain, and external incentives. But it also refers to some barriers that may cause negative effect for an individual intention in knowledge sharing, such as lack of technology, litter knowledge cannot be shared, personal attitude for sharing lack of interested, and confidentiality considerations (Hew and Hara, 2007). Gray (2004) found if they are lack of familiar with online technology or lack of access to technology itself would hinder individual sharing, the same with if they are not interested in how online community works. While (Wasko and Faraj, 2000) refers that if someone is lack of such knowledge or he or she has an uncomfortable experience in previous, it is another barrier to knowledge sharing behavior.

The characteristic of online self-help health community:

1. People don't know each other at first communicate.
2. People are willing to contact and answer the questions, which are posted by other members.
3. People willing to spend time in the self-help community to learn more methods related to their problems.
4. From the perspective of social exchange theory, knowledge community is a kind of communication; the motive of participating in communication is changing constantly. While communication maintains the basis of consistent value perception among members of the knowledge community, such as the return on invested time.
5. The knowledge community is seen as a way to accomplish organizational or process innovation. Establish knowledge communities that bring about changes in systems, organizations, or societies by identifying, producing, describing or disseminating data, information, and knowledge in a knowledge community context. It is clear that meaningful value creation through knowledge value chain production is the prerequisite for this perspective.
6. Their initial goal and topic to participant in community is same, which is getting pregnant and have a healthy baby, but they spend too many time on getting familiar with each other, and any topic can be discuss.
7. The knowledge they share includes change information about personal experience about multiple miscarriage, ectopic pregnancy, assist reproductive technology, in vitro fertility, unknown infertility problems and also share emotional support and confidence to get it through that tough time.
8. Once they build up trust in on online community it would easily contribute to offline activities and thus strengthen interpersonal trust between them.

Research methodology

This study uses quantitative methodology for research and was analyzed by inferential statistics and multiple regression analysis. Multiple regression analysis was performed to examine relationships between dependent variables and the independent variable.

Data collection

Quantitative analysis

The aim of this research is finding out the motivation factors of knowledge sharing in online learning environments. This research analyzes data collected from online digital health fertility community named Bo zhong wang and infertility of We chat group to examine which factors can motivate people to share their knowledge online.

We would post a massage on the infertility column that anyone who wants to learn, to discuss and share their knowledge about infertility, or on the way of having a healthy baby can join to our we chat group. And then post our ID group below to let them join in.

In QQ group we have four self-help groups talking about pregnant mainly, and each group reaches 1,000 people. In Wechat we have 6 groups also, but 400 people for each group. Until Sep 2017, there are around 400 people to consult with us individually in the processing of having a healthy baby. Some of them even succeed to have a baby already; we also build up group for people whom have got pregnant already to share knowledge and information about baby product and body shape courses after surgery.

So, we can get same information from others' group and join in to communicate and observe their sharing and talk to individual directly. Or we post the questionnaire link to the group, anyone whom finishes this questionnaire can get incentive or reward from us, such as baby litter gift or money. Since people who build up the group can persuade their members more effectively to participate any interactive. After we join other's group we would talk to the host of this group to help us and we would give them more valuable suggestion on how to motivate their sharing process according to our conclusion.

Descriptive data about each participant will be collected to provide an overall profile of the community membership in terms of gender, ages, occupation, participant type, and time since diagnosis.

In multiple regression analysis, after we put all the data we gather in questionnaires, we analyze regression in linear, and put knowledge sharing in dependent variable, the rest of self-efficacy, interpersonal trust, norm of reciprocity, perceive related advantaged, perceive compatibility, loyalty dimensions put in independent variable. Then the result comes out automatically. We can know what the relationship is between independent factors and dependent factors. Whether knowledge sharing can be predicted by self-efficacy, interpersonal trust, norm of reciprocity, perceive related advantaged, perceive compatibility, loyalty. Multiple regression analysis was performed to examine relationships between dependent variables and the independent variable.

Research tools

To ensure to keep mainly the same meaning of the questionnaire, firstly we design the questionnaire by English and then translate it into Chinese. Then change to Chinese backward to English to check if it remains the same version (Bock et al. 2005, Wang et al. 2006). Here we list the questionnaires base on others design. And the one designed by the author would also be mentioned later.

The six self-efficacy, interpersonal trust, social network, peer recognition, personality and attitude dimensions are measured by likert scale, respondents indicated their feelings by rating the degrade Of their felling on a five scale Where 1="strong agreed", 2="agreed", 3="Undecidedd", 4="disagreed", 5="strongly disagreed".

Data analysis

After we collect the questionnaire from online health community named bo zhong wang in the hot topic of fertility, in-vitro fertility, prepare pregnancy, in pregnancy period, others' experience, questions and answers column, specialist doctors answer difficulties questions column, motion column for women. Since we use quantitative method, we use the software to input all the answers of questionnaires and then come out with the result, and according to the result we can find which factor can make significant influence to knowledge sharing behavior.

In order to test the hypotheses, a total of 400 questionnaires were distributed through online community from fertility-related online support group. Only 334 members fill up. They completed an online survey of exploring their experience of knowledge sharing in online support group. The survey was conducted over a period of one year with 334 questionnaires. The result was analyzed by using SPSS. This research uses Cronbach's Alpha as a tool to test the reliability of the questionnaire.

Table 1 Reliability test of questionnaire

Variable	N of Items	Cronbach's Alpha
Norm of Reciprocity	3	0.882
Interpersonal Trust	3	0.88
Self-Efficiency	10	0.943
Perceive Relative Advantage	3	0.921
Perceive Compatibility	4	0.915
Knowledge Share Behavior	3	0.915
Community Loyalty	4	0.954

Table 1 shows all of the variable's Cronbach's Alpha are greater than 0.8, so this questionnaire is believing in reliable.

Table 2 result of hypothesis 1 to hypothesis 5

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-0.696	0.264		-2.642	0.009		
	AVNOR	0.063	0.063	0.05	1.01	0.313	0.353	2.833
	AVIT	0.15	0.051	0.144	2.964	0.003	0.367	2.722
	AVSE	0.195	0.068	0.149	2.864	0.004	0.322	3.11
	AVPR	-0.107	0.073	-0.083	-1.463	0.145	0.269	3.721
	AVPCA	0.782	0.072	0.644	10.859	0.000	0.247	4.053

a Dependent Variable: AVSKB
R=0.84
R square=0.71
Adjusted R square=0.71 F=164

Because each factor contains related questions, but we take the average one to analyze. AVNO is average point of norm of reciprocity, AVIT is average point of interpersonal trust, AVSE is average point of self-efficacy, AVPR is average point of perceive related advantage, and AVPCA is average point of perceive compatibility. Hypothesis 1 shows P=0.313 meaning that the norm of reciprocity has no significant association with knowledge share behavior. Hypothesis 4 indicated P=0.145 meaning that perceive related advantage has no significant influence on knowledge share behavior.

The result indicated that hypotheses H2, H3 and H5 are support because significant lever P lower than 0.05, which is 0.003, 0.004 and 0 separately. Thus, interpersonal trust, self-efficiency, and perceive compatibility have positive influence knowledge share behavior.

From the table, the regression equation can be formulated as:

$$Y=-0.696+0.063X1+0.15X2+0.195X3-0.107X4+0.782X5$$

Where Y is knowledge share behavior, X1 the norm of reciprocity, X2 the interpersonal trust, X3 the self-efficiency, X4 the perceive relative advantage, X5 the perceive compatibility, the error term. It means that for every unit increase in interpersonal trust, the knowledge share behavior will increase by 0.15 units. For every unit increase in self-efficacy, the knowledge share behavior will increase by 0.195 units. For every unit increase in perceive compatibility advantage, the knowledge share behavior will increase by 0.782 units.

Table 3 result of hypothesis 6

Coefficient		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
Model		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.328	0.155		2.114	0.035		
	AVSKB	0.935	0.027	0.888	35.18	0	1	1

a Dependent Variable: AVCL

In this table, this study uses community loyalty as dependent variable, the knowledge share behavior as independent variable. Therefor the community loyalty is Y, knowledge share behavior is X, and the relationship between them was written as below:

Y=0.328+0.027X

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.888a	0.789	0.788	0.65252	2.143

a Predictors: (Constant), AVSKB
b Dependent Variable: AVCL

The result show that there was 78.9% (R Square=0.789) of variance in the dependent variable (community loyalty) which can be explained by independent variables (knowledge share behavior)

The result revealed that function value (p-value=0.035) was related to knowledge share behavior because the p-value of independent variable is less than 0.05, so the hypothesis 6 was accepted.

Summary of hypothesis testing result

The result was showed in table 4. There are 6 hypotheses that analyze on norm of reciprocity, interpersonal trust, self-efficiency, perceive relative advantage, perceived compatibility, knowledge share behavior in this study. The result show ACCEPT means that it is the hypothesis result is consisting of what we had expected. The result show REJECT means the hypothesis result is contracting of what we had expect.

According to the definition of Standardized Coefficients, the independent variables have a greater effect on the dependent variable in a multiple regression which depend on the absolute value of Standardized Coefficients. Compare of average point of interpersonal trust 144, average point of self-efficacy is 149, average point of perceive compatibility is the highest one 644. So, the result is that perceived compatibility is most important factor for people sharing knowledge behavior in China online fertility health community. It means that the common value that individual perceives is having a healthy baby through science method as possible as they can. This is the most original intention for them to join in online fertility health community.

Table 4 Summary of hypothesis testing result

Item	Description of hypothesis testing result
H1	Norm of Reciprocity has a positive relationship to knowledge sharing behavior.
H2	Interpersonal trust has a positive relationship to knowledge sharing behavior.
H3	Self-efficacy has a positive relationship to knowledge sharing behavior.
H4	Perceived relative advantage has a positive relationship to knowledge sharing behavior.
H5	Perceived compatibility advantage has a positive relationship to knowledge sharing behavior.
H6	Knowledge sharing behavior has a positive relationship to community loyalty.

Conclusion

The objective of this research was to enhance our understanding of the factors affecting knowledge share behavior in online health community. The study refers to theory and research from multiple main stream research such as social cognitive theory to investigate the impact of these six factors including norm of reciprocity, self-efficacy, interpersonal trust, perceive advantage, perceive compatibility, and community loyalty on knowledge share behavior. The result from the respondent of women who anticipated knowledge share behavior in China online health community. Mostly is undergoing preparing pregnant procedure. And the survey was carried in the most activity online health community (wechat group) most of them are experience same situation and similar circumstance. Since online health community helps to solves the problem of long procedure of making appointment with doctor, expensive consult fee or registration fee for specialist professor. For example, patient need to pay 1,000 yuan just talk with doctor for 3minutes. Or they spend whole day just for queuing to catch up the numbers to see doctor. It contributes for the patients who are overwhelming when they face pessimism situation. Our target group is women both infertility and fertility whom is undergoing pregnant for health baby. So, we create a topic in online health community and gather them in Wechat group to distribute the questionnaire to analyze which factor may have an effect on individual knowledge share behavior.

The result of this study shows interpersonal trust, self-efficiency, perceived compatibility has positive relationship with knowledge share behavior, and knowledge share behavior also has positive relationship with community loyalty. But there is not relationship between norm of reciprocity, and perceive related advantage with knowledge share behavior.

This research is beneficial to whoever work in maternal and child industry, overseas health and tourism industry, because this whole community is setting up a huge customer database, any feedback that any company would like to test can collect opinion in it.

Implication for business

In order to enhance the competitive power for the group which want to educate their patients or increase learning ability amount patients by knowledge share behavior, also improve the relationship between doctor and patients and their personal ability to deal with infertility treatment. There are four recommendations based on this study as below:

1. There is a relationship between interpersonal trust and knowledge sharing behavior, so if we can build up interpersonal trust relation very well between patients, the more likely they would like to share their knowledge in online health community. For example, we can give more detail on personal profile and make obvious title to let members get familiar with each other well, or host off-line activities to invited active members so that they can affect others from their sharing. People can gain the benefit of knowledge share in online community. For example we can improve their ability in healthcare management.

2. As the result shows, self-efficacy plays a positive role for sharing knowledge in online health community. The way they solve problem by themselves would affect others by sharing behaviors through social media when it comes to same problem. For example, we can top up the column for patient with highly self-efficacy and make the order by total reading times, which give patients guideline through their sharing. Encourage members to share by improve the lever of their experience title to show others they are knowledgeable for sharing.

3. Perceive compatibility advantage had a high correction with knowledge sharing behavior. It is very crucial for entrepreneurs to figure out what is the motivation for patients to join in community, which is fit with their value and needs. For example if problem solving in time is what the value function of community, members would care less the identity of individual and only focus on the result on problem solving. They would put forward the question and interacted with self-efficacy members so others can also learn from it. If finding emotional support is what the value function of community,

4. Knowledge share behavior is the important dimension of creating online community. It is necessary to enhance the four dimensions toward knowledge share behavior. The related enterprise could pay more attention to stimulate members sharing behavior to foster community loyalty. For example, invited new members to join community continuously, the interactive come up with a question, for new member they hold lots of curiosity and need to be answer, especially talking similar experience to unite members more closely. And it can be created new topic for new members to activated the group. The other suggestion for loyalty is that people tend to close to others whom in the same stage or situation with them. It is better to control the number of members by time line, such as by monthly or yearly. The knowledge can be distributed precisely and make sure everyone can get the point, not misunderstand by others interpretation and members can get notice synchronize.

Limitation of research

A limitation of present study is despite online health community has advantage as we point out like helping patient's discovery, exploration and management of personal illness. But we did not explain much disadvantage of online health community, such as the reality of knowledge share by other users. Users did not have enough experience to evaluate the quality of knowledge share by others. The disadvantage of online health community can be for instance, if the article which is posted in community cannot be category well it is very hard for people to navigate relevant knowledge. Too much people interactive and share would make it harder to identify valuable information.

Secondly, the factors that we select is just for target group, which is infertility women, so the framework or element we choose may not be applied to another target group.

Thirdly, for further research should consider the motivation for member to share their knowledge just for helping others or take it as chance to provide their product or services. The motivation may contain both positive and negative side. If the experience which share by others contain too much negative personal emotion, the potential effect on other members when dealing with personal problem needs to be considered.

References

Bock, G., W, & Kim, Y., G. (2002). Breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal, 15* (2), 14–21.

Bock, G.W., Zmud. R.W., Kim. Y. G, et al. (2005). Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. *MIS Quarterly, 29* (1), 87-111.

Chen, C. J., & Hung, S. W. (2010). To give or to receive? Factors influencing members' knowledge sharing and community promotion in professional virtual communities. *Information & management, 47*(4), 226-236.

Chiu, C. M., Hsu, M. H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision support systems, 42*(3), 1872-1888.

Gray, B. (2004). Informal learning in an online community of practice. *Journal of Distance Education, 19*(1), 20.

Hew, K. F., & Hara, N. (2007). Knowledge sharing in online environments: A qualitative case study. *Journal of the American Society for Information Science and Technology, 58*(14), 2310-2324.

Kankanhalli, A., Tan, B. C., & Wei, K. K. (2005). Contributing knowledge to electronic knowledge repositories: an empirical investigation. MIS quarterly, 113-143.

Lin, M. J. J., Hung, S. W., & Chen, C. J. (2009). Fostering the determinants of knowledge sharing in professional virtual communities. *Computers in Human Behavior, 25*(4), 929-939.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Orga- nization Science, 5*(1), 14–37.

Usoro, A., Sharratt, M. W., Tsui, E., & Shekhar, S. (2007). Trust as an antecedent to knowledge sharing in virtual communities of practice. *Knowledge Management Research & Practice, 5*(3), 199-212.

Van Oerle, S., Mahr, D., & Lievens, A. (2016). Coordinating online health communities for cognitive and affective value creation. *Journal of Service Management, 27*(4), 481-506.

Wasko, M. M., & Faraj, S. (2000). "It is what one does": why people participate and help others in electronic communities of practice. *The Journal of Strategic Information Systems, 9*(2), 155-173.

Wright, K. B., & Bell, S. B. (2003). Health-related support groups on the Internet: Linking empirical findings to social support and computer-mediated communication theory. *Journal of Health Psychology, 8*(1), 39-54.

Wu, J. B., Hom, P. W., Tetrick, L. E., Shore, L. M., Jia, L., Li, C., & Song, L. J. (2006). The norm of reciprocity: Scale development and validation in the Chinese context. *Management and Organization Review, 2*(3), 377-402.

Zhao, J., Abrahamson, K., Anderson, J. G., Ha, S., & Widdows, R. (2013). Trust, empathy, social identity, and contribution of knowledge within patient online communities. *Behaviour & Information Technology, 32*(10), 1041-1048.

Yoo, Y., & Torrey, B. (2002). National culture and knowledge management in a global learning organization. The strategic management of intellectual capital and organizational knowledge, 421-434.

Guide for authors

University of the Thai Chamber of Commerce International Journal of Business and Economics (UTCC IJBE) is published by University of the Thai Chamber of Commerce, and Thailand Management Association. It is published twice yearly in a spring and fall edition and is directed toward the needs of academia, practitioners, executives, researchers, students, and the general public interested in business management (i.e., Marketing, Service Management, Innovation and Design in Business, Finance, Banking, Accounting, Economics, Insurance and Risk Management, Production, Industrial and Operation Management, Strategic Management and Management, International and Global Business Management, Entrepreneurships, Organization Behavior, Business Ethics, Business Law, Business System, Hospitality and Tourism Management, Human Resource Management, and Office and Facility Management).

Editorial policy

The UTCC IJBE is designed as a forum for current research, opinions, and identification of trends in business management. The opinions expressed are those of the authors and do not necessarily reflect the opinions of the Editors, the Editorial Review Board, or University of the Thai Chamber of Commerce, and Thailand Management Association.

Objectives

The editorial objectives of UTCC IJBE are to advance knowledge and science and to stimulate greater thought and effort in the fields of business management, and by providing readers with:

- Novel and useful information;
- New business management theory or techniques;
- Research explaining about business management thought and practice;
- Articles in subject areas which have significant current impact on thought and practice in business management.

Content

The UTCC IJBE will mainly consider for publication three types of articles:

1. Articles that report empirical research on business management issues.
2. Articles that report on the development of methodologies and techniques that can enhance business management decision making.
3. Articles that report the application of decision tools to generic or specific business management problems.

Manuscripts should be between 4,000 and 6,000 words, typically 15-20 single-spaced, typewritten pages. Articles of shorter length are also acceptable. Only rarely will it be possible to publish a manuscript of more than 6,000 words.

Review

Articles are considered for publication if they have not been published or accepted for publication elsewhere and are not being concurrently considered elsewhere. Authors will usually be notified of acceptance, rejection, or need for revision within 16 weeks of submission.

No manuscript is accepted for UTCC IJBE until it has been reviewed by the Editor or one of the Associate Editors and at least two outside reviewers who are experts in their respective fields.

All manuscripts are judged on their contribution to the advancement of the science and/or practice of business management. The editors expect all manuscripts to follow accepted standards for scholarly work. Manuscripts are judged not only on depth and scope of ideas presented and their contribution to the field, but also on their clarity, organization, readability, and comprehensibility.

Manuscripts should be written in a manner that is interesting and readable to both practitioners and academics. It is beneficial to include a section regarding managerial implications and discussion of the consequences of applying the proposed ideas. Technical terms should be defined.

Manuscript preparation

Manuscripts should be typed single-spaced in 12-point type using Times Roman or similar type. Use single spacing in endnote references. Please allow the text to wrap, rather than entering a RETURN or LINEFEED after every line.

The sections of the manuscript should be placed in the following order: Cover page, Title page, Authors, Abstract (on a page by itself) and Body, Illustrations, Citation, References, and Appendices.

Cover page

The cover page should include the title of the manuscript and the authors' name(s) in the order in which they will be printed. The following information should be provided for each co-author: name, title, university/company name, mailing address, telephone number, facsimile number, and e-mail address. Please indicate which co-author will serve as the primary contact for the Journal.

In addition to any acknowledgment of financial or technical assistance, this page should include each author's title, present position, and complete address and telephone number. Please keep professional titles succinct.

Title page

Type the title in bold type, all caps, single-spaced, and centered across the top of the first page, in 14 point Times New Roman, as illustrated above.

Authors

The author(s), affiliation(s), mailing address(es), and e-mail address(es) should be single-spaced and centered on the line below the title, in 12 point bold Times New Roman for the author(s), and in normal Times New Roman for the remainders. One line space should be used to separate author(s) from the paper title. Please do not use titles such as Dr., Professor, etc.

Abstract (on a page by itself), and body

Introduce the paper with an abstract of approximately 100-200 words, in 12 point Times New Roman. Begin with the centered heading "Abstract". All body paragraphs should begin flush left (no paragraph indent) and right justified. Single-space the body of the paper. Use 12 point Times New Roman throughout. Figures and tables should be placed as close as possible to where they are cited.

First-level headings state the table or figure number. All tables and images should be embedded into the file and sized appropriately. All photographs should be sampled at 300 dpi (dots per inch). Keep in mind that web graphics are typically sampled at 72 dpi. Photographs must be properly sized and positioned in the body of the paper.

Illustrations

(Tables and figures)

Each illustration should be numbered consecutively within its series type (Table 1, Table 2, Figure 1, Figure 2). If illustrations appear in appendices, they should be numbered consecutively, but separately from body illustrations (e.g., Table A-1, Figure A-1). In the text, refer to tables and figures by their numbers. Avoid using "above," "below," "preceding," and similar terms. All Tables and Figures must have titles. Titles for each Table and Figure should be descriptive but not lengthy. The title should be in bold letters at the top of the Table or Figure.

Tables and Figures should be called **"Table"** or **"Figure"** and should be followed by a blank line and then the title for the table or figure also in bold letters at the top of the table or figure.

For Journal purposes, tables and figures are defined as follows: a table is comprised of rows and columns of numbers and/or text; a figure is a chart, graph, diagram, map, drawing, or any other nontext item that is not a table. Tables should be typed in the following style:

General design

For more effective communication and better quality reproduction when printed, tables and figures should be kept as simple and uncluttered as possible, while conveying all necessary information.

Details

Footnotes should appear directly below illustrations, flush with the left edge, and they should be designated by small letters, rather than asterisks or numerals. Column or row heads should be footnoted only if the footnote applies to all items in the column or row. Complete source information must be provided for illustrations copied or derived from other sources. This complete information should be provided and an author-date citation should be given in a source note on the illustration. (Source notes are sized and placed like footnotes, below any footnotes for the illustration.)

If elements on an illustration are not labelled, but represent certain categories, items, or amounts, a complete key (legend) should be included. Make sure that necessary measures of statistical significance are reported with each illustration. Designate units (percent, dollars, hours, etc.) in column and row headings (tables) or in element labels or keys (figures). Separate from each figure, give numerical values for all points, bars, pie slices, etc., so that they can be readily reproduced by the typesetter, if necessary. Double-check formulae and mathematical terms and equations for consistency, readability, and accuracy. Add extra space between characters to clarify and separate the terms, and be sure that sub and superscript relationships are clear. Check for opening and closing parenthesis and brackets. Write the names of Greek and special characters in the margin. Use tab indents or column alignment, rather than spaces, to align columns and indent headings.

English (USA) spelling should be used; foreign terms not commonly used in English (USA) should be italicized.

Regarding mathematical notation

The percent sign (%) should be used in text and in tables. Mathematical notation must be clear within the text and illustrations. All equations must be very clearly typed. Display (separate line) equations should be aligned to the left margin. Italic type is used for letters in equations, except for trigonometric functions and logarithm abbreviations, which are plain (normal) type. Matrices and vectors are in boldface type. (If these cannot be typed in italic and boldface, italic type can be indicated by a hand-drawn straight underline and boldface by a wavy underline). Unusual and Greek symbols should be typed in the text using the Symbol capability. If no Symbol capability is possible, such special characters should be identified by name in a marginal note. (This is important; the editor may be not familiar with these symbols and may have difficulty producing the correct one without a marginal note.) For equations that might be too long to type in a 6” column, indicate appropriate breaks.

Citation

The UTCC IJBE follows the reference format of Academy of Management Journal. This format is available at the AMJ'swebsitehttp://aom.pace.edu/amjnew/style_guide.html. The use of footnotes is discouraged.

References

References are to be listed alphabetically, last name first, followed by publication date in parentheses. Use full first name, not just initials. The reference list should be typed single-spaced in 12-point type. Please let the Endnotes wrap rather than using tabs or returns at the end of internal lines. Do not use indents, tabs, or symbols to delineate your paragraphs. Instead, use two hard returns between each reference.

Proceedings/ Journal articles:

Supaporn Kiattisin (2007), “Detection of an Acute Leukemia Using an Active Contour Model,” *Proceedings of the 4th International Joint Conference on Computer Science and Software Engineering, May 3-4, 2007,* Hotel Sofitel Raja Orchid, Khon Kaen, Thailand.

Chirapandu, S. & Yoopetch, C. (2009), “Bank Credit Card Adoption Criteria and Marketing Implications,” *International Journal of Business in Asia, Vol.1, No. 1,* pp. 1- 20.

Books:

Akachai Apisakkul & Thasana Boonkwan (2004), *Strategic Management, 4th Ed.* New York: McGraw-Hill Irwin.

Authors are responsible for the accuracy of their references. Check them carefully. Readers’ questions and comments about incomplete and inaccurate References will be referred to the article authors with a follow-up by the Editor. All authors of a referenced work should be listed; et al. should not be used in the Reference list. Undefined acronyms should not be used.

Appendices

If any mathematical proof or development is used but not critical to the exposition of the main argument of the manuscript, authors should include it in an appendix. An appendix may also be used for the mathematical material that may be beyond the level of the average reader.

Permissions

Submitting a manuscript to UTCC IJBE constitutes an assignment of copyright to the Journal and a guarantee that the work is original. It also indicates that the author(s) owns it, and that no part of it has been previously published in substantially the same form, that it is not being published or considered for publication elsewhere, and that any use of others' materials is by permission or falls within fair use standards of copyright law. The author(s) is responsible for obtaining any necessary permission from copyright holders and for paying any necessary fees. Extensive paraphrasing is considered disguised copying; permission is required.

Portions of an item, such as some of the data from a table, or part of a graphic representation of a model, can be used without permission if they are properly credited with full and exact source information and do not comprise a significant portion of the submitted article. Copies of written permissions should be submitted with the final manuscript.

Online submission

Manuscripts should be submitted electronically at http://ijbejournal.com/, in Microsoft Word.

The sections of the manuscript should be placed in the following order: Cover page, Title page, Authors, Abstract (on a page by itself) and Body, Illustrations, Citation, References, and Appendices.