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• MISSION STATEMENT

The goal of AJMI is to publish insightful, original and timely research that describes or potentially impacts management and/or innovation within the ASEAN context. AJMI is multidisciplinary in scope and encourages interdisciplinary research. The journal welcomes submissions in all topics related to management, as well as topics related to innovation; regardless of discipline or subject area.

Topics that are either distinctly ASEAN-related or regional or international in scope, but of relevance to ASEAN readers are encouraged. In addition to empirical research, AJMI accepts conceptual papers as well as papers that provide new insights into previous work and/or conventional wisdom. Also accepted are structured/systematic literature reviews that follow a specific methodology. Manuscripts that are simply literature reviews are generally discouraged.

Relevant topics include, but are not limited to:

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- Innovation & Entrepreneurship Development
- Hospitality Management
- Project Management
- Operations & Supply Chain Management
- Business Ethics
- Educational Leadership & Management

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 - *One Author*
 Author's Last name (Year) stated that "direct quote" (page number).
 Isenberg (2007) stated that "international dispersion is on the rise" (p. 56). **Or**
 "Direct quote" (Last name, Year, page number)
 "International dispersion is on the rise" (Isenberg, 2007, p. 56).
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 First author's Last name and second author's Last name (Year, page number) mentioned that "direct quote" (page number).
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 "International dispersion is on the rise" (Isenberg & Kerr, 2007, p. 56).
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 - Indent the text roughly half an inch from the left margin
 - Remove any quotation marks

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 As Krugman (2019) stated:
 Maybe the larger point here is that there tends to be a certain amount of mysticism about trade policy, because the fact that it's global and touches on one of the most famous insights in economics, the theory of comparative advantage, gives it an amount of mind space somewhat disproportionate to its actual economic importance. (p. 3).
- Parenthetical Citing
 - *One Author*
 Author's Last name (Year) in-text parenthetical citation (paraphrase).
 Isenberg (2007) argues that cross-border migration is increasing. **Or**
 Paraphrase (Last name, Year)
 Cross-border migration is increasing (Isenberg, 2007).
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 First author's Last name and second author's Last name (Year) paraphrase.
 Kerr and Isenberg (2007) argued that cross-border migration is increasing.
Or
 Paraphrase (first author's Last name & second author's Last name, Year).
 Cross-border migration is on the rise (Isenberg & Kerr, 2007).

- *Three to Five Authors*

All authors' Last names (Year) paraphrase.

Kerr, Issenberg, and Steward (2007) argued that cross-border migration is increasing.

Or

Paraphrase (all authors' Last names, Year).

Cross-border migration is increasing (Isenberg, Kerr, & Steward, 2007).

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Isenberg et al. (2007) found that the event resulted in thousands of people flocking to the border.

Or

The event resulted in thousands of people flocking to the border (Isenberg et al., 2007).

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- References appear at the end of the manuscript body in alphabetical order by the first word in the reference (usually the author's last name, sometimes the title).
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- If more than one work by an author is cited, list them by earliest publication date first.
- If the list contains more than one item published by the same author(s) in the same year, add lower case letters immediately after the year to distinguish them (e.g. 1983a).
- If there is no author, the title moves to the author position (filed under the first significant word of the title).
- Reference list entries should be indented half an inch or 12 mm (five to seven spaces) on the second and subsequent lines of the reference list for every entry - a hanging indent is the preferred style (i.e. entries should begin flush left, and the second and subsequent lines should be indented).
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- *One Author*

Author, F. M. / Organization. (Year). *Topic Title*. City: Publisher.

Nagel, P. C. (1992). *The Lees of Virginia: Seven generations of an American family*. New York: Oxford University Press.

- *Two Authors*

Author, F. M., & Author, F. M. (Year). *Topic Title*. City: Publisher.

Nagel, P. C., & Sampson, T. (1995). *Seven generations of an American family*. New York: Oxford University Press.

- *Three Authors*

Author, F. M., Author, F. M., & Author, F. M. (Year). *Topic Title*. City: Publisher.
Nagel, P. C., Sampson, T., & Hubbard, A. J. (1992). *The Lees of Virginia: Seven generations of an American family*. New York: Oxford University Press.

- **Journal**

Author, F. M. (Year). Title of article. *Title of Journal*, vol. (issue), pp xxx-xxx.
Turner, R. A. (2007). Coaching and consulting in multicultural contexts. *Consulting Psychology Journal: Practice and Research*, 59(4), 241-243.

- **Website**

Author, F. M./ Organization. (Year of Publication). Web page title. Retrieved (Date) from URL Address.

Bogati, S. (2013, October 14). Hospitality Industry in Nepal. Retrieved November 3, 2018, from <http://hospitalityindustryinnepal.blogspot.com/>

- **Newspaper**

Author, F. M. / Organization (Year, month, day published). Title of article. *Title of newspaper*, page.

Parker, T. D. (2009, August 3). Getting rid of side stitches. *The Washington Post*, p. E1, E4.

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There are two different styles for graphics in APA format: **Figures** (charts, images, pictures) and **Tables**.

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- The first graphic (chart, drawing, or image) will be labeled as Figure 1 and be the first one mentioned in the article.
- Subsequent ones will follow in the appropriate numeral order in which they appear in the article.
- Follow APA Referencing Style format for each source type listed as shown below. This means that both the Title and the Source are written below the Figure.



Source: Author's Last name OR Organization's name (Year, Page number OR Online)
Khoman (2017, p. 137)

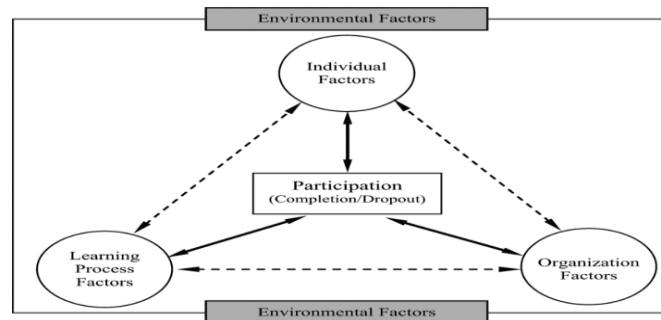


Figure 1: Conceptual framework

Source: Author's Last name OR Organization's name (Year: Page number OR Online)
Wang (2019: p. 45)

- Tables

Tables are labelled separately to Figures and should follow the instructions below.

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- The APA Referencing Style format for a Table differs to that of a Figure. A Table has the Title above the Table, and the Source will be listed below.

Table 2: Domestic Tourism in Ayutthaya and Sukhothai in 2004

Type of Data (2004)	Ayutthaya	Sukhothai
Visitor	3,023,933	1,915,975
Thai		1,107,958
Foreigners		

Source: Author's Last name OR Organization's name (Year: Page number OR Online)
Tourism Authority of Thailand (2005: Online)

For any source type not shown above, go to the APA website for references.

References

- APA (2010). *Publication Manual of the American Psychological Association* Washington, D.C.: American Psychological Association (6th ed). Retrieved April 5, 2019 from: <https://opentextbc.ca/researchmethods/chapter/american-psychological-association-apa-style/>
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Editorial

Dear Readers,

Welcome to Volume 6, Number 1 of the ASEAN Journal of Management and Innovation (AJMI). This is my first issue as Editor-in-Chief, a new role which I am very pleased and honored to assume. It has been the case since its inception more than five years ago that the AJMI remains committed more than ever to the dissemination of findings of both the academic and business communities that expand the knowledge base about management, innovation and organizational development. Those familiar with the format of the journal will notice that the introduction to AJMI has been substantially expanded and includes more specific information about the expected components of the research papers submitted, be they empirical or conceptual research, and AMJI style guide. This is in order to facilitate the process of writing and submitting a research paper – especially for those seeking publication for the first time – and maintain high standards.

In keeping with the mission of AMJI to publish timely research within the ASEAN context, contributions to this issue tackle a variety of topics that range from population aging to online marketing and also feature more specific topics such as sustainable community capacity building and Enterprise Resource Planning (ERP).

Southeast Asia is getting older and experiencing growth in the number and proportion of older persons in its population – those aged 60 or over. This is the inevitable consequence of the demographic transition from high to low fertility and the increase in longevity on the back of substantial progress in improving people's health and well-being and reducing mortality risks.

Two ASEAN member states, Singapore and Thailand, are fast aging and projected to have shifted from 'aged' to 'superaged' societies by 2030 as defined by the CIA World Fact Book (2018). Combining with a low and ultra-low fertility, an aging population could have far-reaching political and socio-economic implications and lead to demographically problematic outcomes. As the 'old man' of Southeast Asia, Thailand is especially concerned as the percentage of Thai people over 60 years old is projected by the United Nations to rise from 15.8% in 2015 to 26.4% by 2030 and 37.1% by 2050 (United Nations, 2015). How much of a strain the increasing proportion of individuals projected to move into retirement during the next decades will be on its health care system and pension scheme largely depends on the health trajectory of older persons (and of course their level of economic self-sufficiency). For some, the added years of life expectancy may be years spent in disability or ill health. Old age may thus mean increasing dependency and vulnerability associated with declining health and a growing need for care and support. For others, however, it may mean enjoying their added years of life in good health. In their study titled *Holistic View on Successful Aging: Life Course and Current Factors Determining Successful Aging in Thailand*, **Suphicha Booranavitayaporn** and **Sid Suntrayuth** examine three criteria of successful aging, life

satisfaction, well-being, and self-actualization, and emphasize the importance preparing well for old age.

The swelling ranks of the elderly augur of market opportunities and are shaping up well for all aging-population-related industries. One such sector may be herbal products, the likes of those grown in Thapthim Siam 05, a herbal community in Thailand, where **Suthathip Suanmali** and **Paphitchaya Korbsanthia** assess the performance of households. As noted in their article, *Generalized Markov Method for Ranking Supplier Performance in the Herbal Industry: A Case Study of a Herbal Village in Thailand*, the herbal market is expected to steadily grow in the years to come. Some of these offerings could be tailored to meet elderly people's needs and tastes.

As emphasized by **Anucha Wittayakorn-Puripunpinyoo** in his paper titled *The Relationship between Personal Character Traits and the Organizational Performance of Learning Organization: A Case Study of School of Agriculture and Cooperatives*, an important factor in the development of high quality agricultural products is the proper training of the future stakeholders in this primary sector. A strong organizational performance is critical to enhancing the quality of agricultural products.

For retailers targeting the so-called 'grey' market, e- and m-commerce may become essential marketing instruments to reach the steadily growing cohort of 'senior' citizens engaging in online shopping. Three articles focus on social media and their growing importance in trade. In *Contribution of Marketing Capability to Social Media Business Performance*, **Penpattra Tarsako** and **Peerayuth Charoensukmonkul** use data collected from 364 entrepreneurs, who have been selling products via social media channels, to determine how to effectively utilize social media. In *Thailand vs. Indonesia: The Battleground of M-Commerce*, **Ariyaporn Nunthiphatprueksa** investigates the influence of m-commerce design (content and non-content cues on satisfaction and purchase intention) and compares the different results between Thailand and Indonesia. In a third empirical research study titled *Factors in Developing Online and Social Media for Marketing Local Silk & Cotton Products*, **Pachernwaat Srichai** and **Ravee Phoewhawm** explore a number of factors critical to the development of an online site and the sustainable use of social media for the sale and promotion of silk and cotton merchandise made by small entrepreneurs located in northern Thailand. Many of these items may have strong appeal to the growing number of older people who can be reached online.

The effect of social networks (personal network & social media) is also at the core of the research study titled *The Effect of Social Network on Small and Medium Enterprises' Export Mode*. Using a sample of 350 Thai SMEs, **Arpasri Sothonvit** and **Hla Theingi's** paper highlights how critical the use of personal networks and social media is in SMEs' international business strategy formulation and expansion, all the more as, relative to Multinational Enterprises (MNEs), most SMEs lack tangible resources.

Another issue discussed in this volume, one that is receiving increasing attention, is the impact of our activities on the environment and climate change. One such activity being closely examined is our use of gas-powered vehicles. With increasing public pressure to switch to

alternative modes of transportation and the changing legal framework, battery electric vehicles (BEV) are fast gaining currency in the Western world – but is it the case in Southeast Asia? How much more are Thai people willing to pay for a BEV and what are the variables affecting this decision are precisely the questions which **Suthathip Suanmali** and **Nitipon Tansakul** address in *Influential Factors on Willingness to Pay for a Battery Electric Vehicles in Bangkok*. With Thailand at the beginning of the BEV phase, it is critical to explore such queries.

The growing place of environmental issues in the public discourse is due in no small part to the key role non-government organizations (NGOs) have played in raising awareness. Promoting self-reliance using natural materials is precisely the *raison d'être* of one of the NGOs surveyed by **Surasak Jotaworn**, **Mokbul Morshed Ahmad**, and **Supadet Themrat** in their article titled *In Legal Status and Consequences Exploration: The Case of Non-Registered NGOs in Thailand*. Their paper examines the reasons why some NGOs are non-registered NGOs and their implications.

Two contributions to this volume focus on local communities, a reflection of their growing importance to the national economy and sustainable development. In *Community Social Capital Linked to Rural Tourism Opportunities: The Case of a Potato Community in Northern Thailand*, **Traci Morachnick** presents the findings from a participatory action research conducted in a community of villages as part of an effort to increase tourism in that area. Community-based tourism (CBT) and community capacity building (CCB), which focuses on enabling all members of the community, including the poorest and the most disadvantaged, to develop skills and competencies so as to take greater control of their own lives, are also at the core of the article titled *Drivers for Sustainable Community Capacity Building: A Case Study of ECO-LIFE Initiatives in Malaysia and Thailand*. In this empirical paper, **Shelen Ho Wai Han** and **Worawan Ongkrutraksa** discuss two cross-national CCB showcases of good practice, where shared value community-development projects are supported by government agencies, and investigate CCB activities, outcomes, and enablers.

As these comments suggest, this issue is filled with insight and though not all articles in this edition have been mentioned in this introduction, this does not suggest that any article is more worthy than the others. It simply means that this small collection seems appropriate to the theme of this editorial.

Jean-Marc Dautrey, JD
Editor-in-Chief
ASEAN Journal of Management and Innovation

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The CIA World Fact Book defines an aging society as one having 7% of its population over 65, an aged society 14%, and a super aged society 20%. The CIA World Factbook, retrieved May 2019, from: <https://www.cia.gov/library/publications/the-world-factbook/geos/tt.html>

The United Nations, Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Ageing 2015*, New York, NY: United Nations, 2015. Accessed February 2018, from: <http://esa.un.org/unpd/wpp/Excel-Data/population>

Contents

- 1 Thailand vs Indonesia: The Battleground of M-Commerce
Ariyaporn Nunthiphatprueksa
- 17 Holistic View on Successful Aging: Life Course and Current Factors Determining Successful Aging in Thailand
Suphicha Booravitayaporn, Sid Suntrayuth
- 31 Drivers for Sustainable Community Capacity Building: A Case Study of ECO-LIFE Initiatives in Malaysia and Thailand
Shelen Ho Wai Han, Worawan Ongkrutraksa
- 51 Influential Factors on Willingness to Pay for a Battery Electric Vehicle in Bangkok, Thailand
Suthathip Suanmali and Nitipon Tansakul
- 64 Community Social Capital Linked to Rural Tourism Opportunities: The Case of a Potato Community in Northern Thailand
Traci Morachnick
- 75 Contribution of Marketing Capability to Social Media Business Performance
Penpattra Tarsakoo, Peerayuth Charoensukmongkol
- 88 A Comparative Study of the Leadership Styles of Kwon Ping Ho (Banyan Tree Hotels and Resorts) and Kwek Leng Beng (Millennium Hotels and Resorts)
Pipatpong Fakfare
- 102 Generalized Markov Method for Ranking Supplier Performance in the Herbal Industry: A Case Study of a Herbal Village in Thailand
Suthathip Suanmali, Paphitchaya Korbsanthia
- 118 The Effect of Social Network on Small and Medium Enterprises' Export Mode Choice
Arpasri Sothonvit, Hla Theingi
- 130 Determinants Factors Affecting the Competitiveness of Thai Ocean Freight Forwarders: An Application of the Confirmatory Factor Analysis
Sriwilai Suphalak, Luksanato Sarawut
- 141 Enterprise Resource Planning (ERP) Adoption in the Thai Agricultural Sector
Chalett Vichinrojjarul, Sid Suntrayuth
- 168 Legal Status and Consequences Exploration: The Case of Non-Registered NGOs in Thailand
Surasak Jotaworn, Mokbul Morshed Ahmad, Supadet Themrat

- 185 Factors in Developing Online and Social Media for Marketing Local Silk & Cotton Products
Pachernwaat Srichai, Ravee Phoewhawm

- 200 Strategic Internal Audit Proficiency on Sustainable Audit Success: An Empirical Investigation of Listed firms in Thailand
Suwan Wangcharoendate

- 212 The Relationship between Personal Characters and Organizational Performance of Learning Organization: A Case Study of School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University, Thailand
Anucha Wittayakorn-Puripunpinyoo

Book Review

- 223 Marketing for Competitiveness: Asia to the World: In the Age of Digital Consumers. Philip Kotler, Hermawan Kartajaya, and Hooi Den Huan. Singapore: World Scientific, 2017. 288 pp. ISBN 978-981-3201-96-5 (pbk).
Reviewed by Thittapong Daengrasmisopon

Thailand VS. Indonesia: The Battleground of M-Commerce

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Abstract

Technology advancement has brought m-commerce into the limelight in the retailing industry. Many people now engage with online shopping especially through their mobile devices. This empirical research aims to investigate the influence of m-commerce design; content cues (web informativeness and web customization), and non-content cues (web navigability, web aesthetic and web interaction) on satisfaction and purchase intention and compare the different results between Thailand and Indonesia. The results mostly verify the proposed relationships. Among the five independent variables, web informativeness and web navigability were found to be the antecedent of satisfaction in Thailand and Indonesia. While web customization and web aesthetic significantly led to satisfaction only in Thailand, context and web interaction conversely exhibited their impact on satisfaction only in Indonesia. In addition, web informativeness, web aesthetic and web interaction statically and positively influence the formation of purchase intention in both nations. A number of managerial implications are discussed.

Keywords: M-commerce, Satisfaction, Purchase intention

1. Introduction

With the internet and mobile technology enabling new platforms of communication and business transaction, mobile internet usage has seen a remarkably growth globally over the past years. Undoubtedly, m-commerce and social shopping have played a critical role in the retail industry and become dreadful competitors for brick-and-mortar stores. People have become more familiar with mobile technology, especially those residing in developing countries where technology and innovation is later adopted in comparison to innovators and early adopter countries. This has resulted in the increasing number of internet users and its usage rate on a global scale. Global mobile data traffic is expected to increase sevenfold from seven exabytes per month in 2016 to 49 exabytes in 2021 (The Statistics Portal, 2018a).

Even though the current market size of e-commerce is much smaller than the retail industry, its performance places it among the most promising markets. The growth rate of e-commerce outnumbers that of the retail industry. E-commerce is expected to grow 78% from 2017 to 2020 while the retail industry is set to experience only 18% growth (The Statistics Portal, 2018b, 2018c). There are therefore good reasons for the optimistic outlook for the growth of e-commerce and especially m-commerce market.

One of the successful m-commerce platforms has been introduced as social shopping (Turban, King, & Lang, 2010). It has combined the functionalities of online shopping and social network, within the online shopping context. A relationship among merchants, customers and interested parties is thus created (Lee & Lee, 2012). The characteristics of social shopping benefit both the demand and supply side of the business; customers receive free flow of information at the most convenience time. In addition, social shopping makes it possible for consumers to share their product experience and shopping experience after use (Hajli, 2015).

On the other hand, service providers employ social shopping as a tool to boost up revenue, maintain customer relationship, and track customer information. In essence, customers and sellers enjoy a number of benefits of social shopping that neither old-fashioned shopping web nor physical store can offer, especially the establishment of potential interaction among users, initiative and simplification of purchase decisions (Olbrich & Holsing, 2011). Regardless of business, social interaction among users is a great mechanism to deepen customer loyalty and retention, perhaps the most important elements for continued success (C. L. Hsu, Chen, & Kumar, 2018).

Interestingly, differences in shopping behavior across cultures exist in various way: prices (Ackerman & Tellis, 2001); shopping motivation (Evanschitzky et al., 2014; Gentina, Butori, Rose, & Bakir, 2014; Horváth & Adıgüzel, 2018); selection of retail channels (Lu, Pattnaik, Xiao, & Voola, 2018); impulse buying (Pornpitakpan & Han, 2013); and online purchase intentions (Ganguly, Dash, Cyr, & Head, 2010; Pookulangara & Koesler, 2011). However, little is known about the different impacts of website quality on purchase intention from a cross cultural perspective especially in m-commerce setting. Users across cultures may have different perceptions toward online shopping through m-commerce and their purchase intentions are consequently affected in various ways. It is necessary to investigate its quality, incorporating website quality and customer relationship quality, prior to evaluating the influence of m-commerce on other variables under the study.

Therefore, this empirical research takes cultural consideration into account by investigating the determinants of purchase intentions - by emphasizing two major facets; website quality and customer relationship quality, between users in Thailand and Indonesia, the two largest economies in ASEAN. Indonesia's retail e-commerce sales hit \$5.29 billion in 2016 and are soon to reach \$45.6 billion or the equivalent to a 52% share of ASEAN e-commerce by 2025 (Chadha, 2016; Tempo Magazine, 2016). This spells of huge opportunities for Indonesia being the next frontier for the world's e-commerce boom. In the meantime, in Thailand, the number of daily times spent on the mobile internet was the highest in the world with the average of 9.34 hours per day (Thai Visa, 2018). Add to that the fact that Thailand's social media penetration was among the world's top ten. This reflects the fact that a vast majority of the Thai population is already engaged with the use of digital technologies and m-commerce across platforms. This is evidenced by a total of \$2.9 billion e-commerce market values in the past year (Yongjiranon, 2018), which makes Thailand the second largest e-commerce market in ASEAN, next to Indonesia. Undoubtedly, Indonesia and Thailand continue to be promising markets for e-commerce, not only for ASEAN but also in the global marketplace that is likely to attract a number of investors and make this battleground even more competitive.

2. Literature Review

Mobile Commerce (M-Commerce)

As a result of technology advancement, consumers have access to necessary information at most convenience time through various devices and platforms. M-commerce is part of the disruptive technology that totally changed the world of retail industry. With speedy development of information communication technology, m-commerce technology is inevitably affected. The growing popularity of mobile and internet penetration in the past decades has brought opportunities for businesses to have new trade platforms in e-commerce, ever since, the m-commerce was introduced (Tredinnick, 2006). Since consumers are now having less gap between the online and offline world, m-commerce has become one of the trade phenomenon in the digital era.

A number of definitions have been given to m-commerce. While Varshney and Vetter (2002) stated that m-commerce is an extension of traditional e-commerce, Moshin, Mudtadir, and Ishaq (2003) differentiated m-commerce by focusing on the occurrence of transaction that has been taken place over the wireless devices rather than on desktop computer. Some scholars believe that m-commerce is not a subset of e-commerce due to capabilities that e-commerce totally lacks, namely, its interaction style, usage pattern, mobility and reachability (Feng, Hoegler, & Stucky, 2006). From the above discussion, the definition of m-commerce in this study particularly refers to the commerce activities and transactions operating through mobile internet and wireless handheld devices (i.e. smartphone, tablet).

The growth of m-commerce market is parallel to the increasing usage of mobile devices and vice versa. The more people using mobile devices, the larger pool of potential consumer available to the supply side of the business. Undoubtedly, the application of m-commerce has been adopting by many companies in several means. Some design their official web to be mobile-friendly to ensure that webpage would perform well across the devices as it is intended to. Some create mobile application to simplify all the activities and seamlessly interact with users. M-commerce utilize the key advantages of mobile devices to deliver better transaction services to users. M-commerce does not only offer unique services (customization service) among users but the ubiquity of mobile phones also enables customers to have 24/7 access to the information (Chong, Chan, & Ooi, 2012; Faqih & Jaradat, 2015). This means that users are a click away in accessing information regardless location and time condition. The information is also presented in real-time manner. The feature of customization service (also known as content customization) is the data-driven creation to individual customer on their interest and preferences. This requires users less effort in finding information within m-commerce setting (Eastin, Brinson, Doorey, & Wilcox, 2016).

To date, many of m-commerce operators have applied the dominant features of social media in their platforms. Global users are encouraged to share their shopping experience with others within virtual communities (Liang, Ho, Li, & Turban, 2011). From this perspective, m-commerce becomes a strong mechanism, which enables consumer to share commercial-related information (i.e. ratings, reviews, and recommendations) with consumer peers (Lin, Li, & Wang, 2017). With more organic information available, product evaluation and purchasing decision is therefore improved (Wang & Zhang, 2012). With such unique functions previously available to none in the market, the popularity of m-commerce is on the rise. In 2015, the share of m-commerce in e-commerce was almost a 200% increase from its previous year (Millwood, 2015).

The differences between traditional e-commerce and m-commerce is exhibited in Table 1. With the limited resources small companies possess, the competitive capability to beat giants in the industry is near to impossible. With m-commerce, firms stand a chance of winning over competitors not only because firms can adapt such technology to transform consumers' shopping experience but consumers become more impressive as well. However, the application of m-commerce remains vague due to the nature of rapid technology change. Managers and practitioners may find it a challenge to make use of proper m-commerce function. It is therefore necessary to understand what could help improving m-commerce website to become more effective by taking website quality into consideration.

Table 1: E-Commerce vs. M-Commerce

	E-commerce	M-Commerce
Transaction	Managed directly over the internet	Transaction occur through mobile devices with internet or cellular data
Commerce activities	With the aid of computer and laptop	With the aid of handheld devices including smartphones, tablets, iPad, PDA's (Personal Digital Assistant)
Connectivity	Narrow. Only available where internet and electivity is being reached	Broader, as internet is not a mandatory and due to is portability
Payment	Mainly credit card	Mobile banking and credit card
Platform	Official web store website	Official web store (mobile version/web app)
Security	Regular security	More extensive with the potential use of biometric authentication (finger scan, face ID)

M-Commerce Design

M-commerce design is second to none when it comes to the quality of m-commerce since it significantly impacts consumers' intention to purchase (Bai, Law, & Wen, 2008; Hasanov & Khalid, 2015). Once customers get into m-commerce website, the initial interface between customers and their shopping experience occurs through m-commerce homepage. Therefore, the perception of a shopping experience is firstly influenced by the m-commerce design. M-commerce design assessment is made up of a number of constructs however varied from one study to another depending on the research's focus. The examples of m-commerce design are, but not limited to, information/content quality, usability, design/appearance, perceived control, shopping enjoyment, navigability, reliability, security, and speed (Bai et al., 2008; Hasanov & Khalid, 2015; Kim & Niehm, 2009; Koufaris, 2002; Nunthiphatprueksa & Suntrayuth, 2017; Webb & Webb, 2004). Specifically, this paper investigates the impact of m-commerce design by emphasizing on two major dimensions; content design (web informativeness and web customization) and non-content design (web navigability, web aesthetic and web interaction) The details of each are fully discussed in following paragraph.

Content Design

Website Informativeness

Website informativeness refers to the characteristics of website's information. Website informativeness, perhaps the most important dimension as far as website quality is concerned, delivers key values to a pool of consumers (L. Hasan & Abuelrub, 2011). The website informativeness is therefore derived from consumers' overall evaluation towards information quality accessed by the degree of accuracy, completeness, understandability, timeliness, and availability as provided in m-commerce website (C.-L. Hsu, Chen, Kikuchi, & Machida, 2017; Kim & Niehm, 2009; Nunthiphatprueksa & Suntrayuth, 2017). Website informativeness does not only enable consumers to have access to requested information in a most convenient manner, it facilitates m-commerce to convey projected information and delivers value added piece of information to consumers as well. From this perspective, the likelihood of satisfaction and behavioral intention is increased through providing website informativeness. Unlike traditional store where employees remain at customers' disposal when needed, website informativeness is the only point by which customers can get information from.

Therefore, website informativeness highly influences how consumers evaluate and exhibit their future shopping action. Due to the fact that online shopping involves some information related to the product, price, promotion, delivery, reviews from previous user, and comparison among brands, the conveyed message within m-commerce website is capable of enhancing consumers' satisfaction and eventually leading to intention to purchase (Chiu, Hsieh, & Kao, 2005; Kim & Niehm, 2009). On a different scenario, once customers are exposed to irrelevant

information provided through m-commerce website, customer dissatisfaction is initially formed, and customers end up giving resource and exit website even before the transaction is being made (B. Hasan, 2016; Sismeiro & Bucklin, 2004). Thus, it is hypothesized that:

H1A: Web informativeness positively impacts satisfaction.

H1B: Web informativeness positively impacts purchase intention.

Web Customization

Web customization, key contributor to m-commerce success, refers to the degree to which information delivered is tailored to individual customers based on their selected preferences and interest (Kalakota & Robinson, 1990). With easy access to information of m-commerce, it brings advantages and convenience to customers. However, huge disadvantage lies within the overwhelming amount of information customers are exposed to and create a difficulty to readily access the information needed. Besides, the amount of information is overwhelming and simply led to information overload. Web customization therefore needs wide attention from m-commerce web developers in order to help potential customers find their interested information within a shorter time.

This one-on-one marketing sheds the light on individual preferences. Therefore, information and promotion offered vary. Web customization, user-driven content, allow firms to fasten the decision-making process as well as enhance their shopping experience. The higher degree of dynamic adaptation of content, the more outputs are relevant and reduced by customizing user's needs (Kalakota & Robinson, 1990). The study discovered that web customization can significantly influence customer satisfaction in m-commerce setting (Choi, Seol, Lee, Cho, & Park, 2008). Therefore, it is hypothesized that:

H2A: Web customization positively impacts satisfaction.

H2B: Web customization positively impacts purchase intention.

Non-Content Design

Web Navigability

Website design, one of the mainstreams in website quality study, refers to the attractiveness of the website's appearance (Li & Yeh, 2010). The elements of website design include two major aspects; navigability and visual elements (Cyr, 2008). While web navigability discusses the organization of the website, the visual elements refer to aesthetic appearance covering color, shapes, images, or streaming video. Navigability impacts the amount of effort consumers use while navigating the website or searching for information (Vance, Elie-Dit-Cosaque, & Straub, 2008). Therefore, the ease of navigability should be designed in order to minimize consumers' effort and enable consumers to reach information at their soonest convenience. Since customers in digital era have less tolerance, navigability should be direct and simplify the purchase transaction. On the other hand, complicated navigation design disturbs consumers and results in perceived irritation (B. Hasan, 2016). Thus, it is hypothesized that:

H3A: Web navigability positively impacts satisfaction.

H3B: Web navigability positively impacts purchase intention.

Web Aesthetic

How aesthetic design helps tradition stores to attract consumers reflects the importance of website design as far as the online marketplace is concerned. Web aesthetic can effectively change visitors to customers (Gudigantala, Bicen, & Eom, 2016). Pleasing website design is more likely to attract potential consumers to visit and make a purchase transaction (Mithas, Ramasubbu, Krishnan, & Fornell, 2006). The study of Simon (2001) found out that website design is antecedent of satisfaction with different interpretation of color appeal across cultures.

Moreover, website design contributes to the formation of positive consumers' perception and favorable responses in online shopping context (Kim & Niehm, 2009). Simply speaking, consumer shopping experience is established, prior to the actual purchase, through website design. It is therefore important to develop pleasing website design in order to improve consumer's perception and arouse behavioral intention. Based on above discussion, it is hypothesized that:

H4A: Web aesthetic positively impacts satisfaction.

H4B: Web aesthetic positively impacts purchase intention.

Web Interaction

Website interaction within m-commerce website refers to the mutual interaction among users within m-commerce context. Such interaction can be achieved through user generated content (UGC) and the sharing of shopping experiences (Zhang, Lu, Gupta, & Zhao, 2014). Social interaction in m-commerce environment allows users to present themselves. Equally important, social interaction makes it possible for a customer to become a source of either informational or emotional support to other users (Liang et al., 2011). Accordingly, a result of social interaction influenced customers' emotion (Hassanein & Head, 2005). Social factor is a significant determinant of relationship quality (i.e. satisfaction) as well as intention to perform in the future in m-commerce context (Liang et al., 2011). Users who were emotionally satisfied with social interaction in m-commerce website may become more comfortable and even more satisfy and enjoy their shopping experience. Thus, it is hypothesized that:

H5A: Web interaction positively impacts satisfaction.

H6B: Web interaction positively impacts purchase intention.

Satisfaction

Satisfaction is defined as customers' feeling of pleasure deriving from the comparison between one's expectations in relation to the perceived performance. If perceived performance exceeds the expectations, customer satisfaction is established. On a different scenario, dissatisfaction or disappointment is formed once customer-perceived performance is below his/her initial expectation. Satisfaction has been long verified as the antecedent and a major driven of purchase intention across research settings. Specifically, in the online shopping context, selling price is a primary key success factor in early years. As time passes, website quality rather becomes a prominent mechanism in enhancing customer satisfaction and loyalty (Parasuraman, Zeithaml, & Malhotra, 2005). Therefore, it is hypothesized that:

H6: Satisfaction in m-commerce website positively impacts purchase intention.

3. Research Methodology

Research Model

The research model of this study is developed based on the study of related literature and is presented in Figure 1. The model proposes that the three independent variables, which include website informativeness, website design, and website interaction, positively impact customers' satisfaction and purchase intention in m-commerce website context.

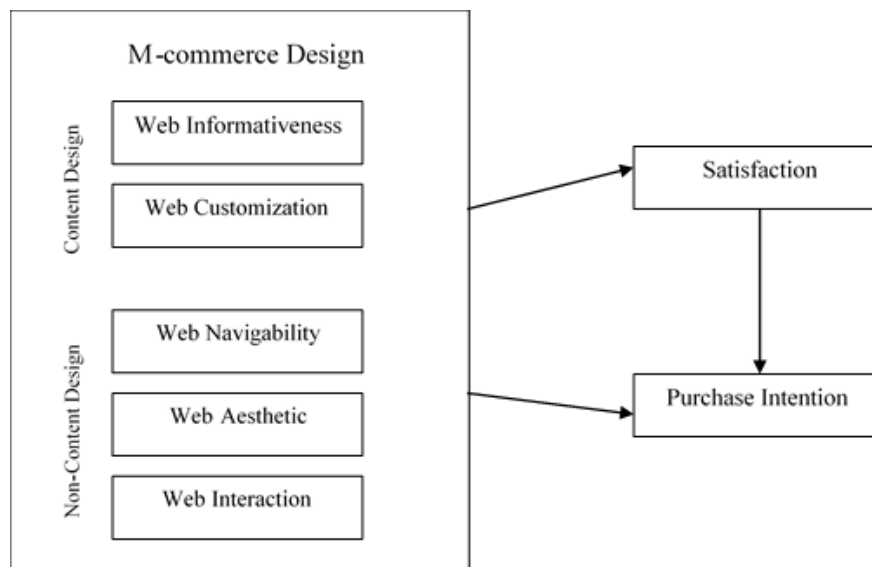


Figure 1: Research Model

Construct Measurements

Whenever possible and wherever appropriate, the measurements of each key construct were developed from existing scales employed in previous literature related to e-commerce and website quality. Except for the respondents' profile, all constructs were measured by a 5-point scale (1 = strongly disagree; 5 = strongly agree). The questionnaire is sectioned into five main parts: content design, non-content design, customer satisfaction, purchase intention and respondent's profile. Website quality is operationalized by four variables, including web informativeness, web customization, web design, and web interaction. Web informativeness is evaluated based on five statements adapted from C.-L. Hsu et al. (2017), Kim and Niehm (2009), and Zheng, Zhao, and Stylianou (2013). For example, one of the statement is "Accuracy of information will influence my decision to shop on this store". Web customization was adopted from Choi et al. (2008) and Kassim and Ismail (2009).

The three statements aim to evaluate participants' opinions towards the degree of web customization. Regarding website design, six statements were adopted from B. Hasan (2016) and Zheng et al. (2013). While three statements are about accessing website navigability, the rest evaluates website visual design. Website interaction is measured by the items primarily constructed by Zheng et al. (2013), e.g. "This store allows me to interact with other users by various methods." Participants were also asked to rate their opinion towards their customer satisfaction through three statements; I'm satisfied/pleased/delighted with the overall experience of shopping in this store (Zheng et al., 2013).

The final variable, the measurement of purchase intention was modified based on the study of Wei, Marthandan, Chong, Ooi, and Arumugam (2008). Participants responded to the following statements: "Assume that I have access to m-commerce systems, I intent to use them"; "I intend to use m-commerce if the cost is reasonable for me"; "I believe I will use mobile commerce in the future"; and "I believe my interest towards m-commerce will increase in the future".

Sample and Data Collection

This quantitative study employs an online self-administrative questionnaire as a research tool to investigate the hypothesized relationships. The questionnaire was distributed using a

convenience sample method drawn from college students, aged between 18-25 years. This is not only because their mobile activity is expected to increase but because on average they are 2.5 times more likely to shop online than other age segmentation (Burststein & LaMontagne, 2015). In this study, a prescreen question was first used to ensure that participants had engaged in any kind of online shopping over the past three months. This prescreen question ensured that participants actually experienced online shopping and were able to recall their perception and attitude towards m-commerce before answering the questionnaire. Obviously, meaningful perception of m-commerce attributes could not be received from non-experienced participants.

From a total of 600 questionnaires distributed to Thai and Indonesian respondents, 334 valid responses were returned, yielded a response rate of 55.6 percent. There was a fairly even proportion between both nationalities; 166 (49.7%) were Thais, and 168 (50.3%) Indonesians. Table 2 summarized respondents' profile for both nationalities in terms of gender, age, monthly income, average spending on m-commerce, and product categories.

Table 2: Respondents' Profile

	THA		IND	
	n	%	n	%
Gender				
Male	73	43.98	69	41.1
Female	93	56.02	99	58.9
Age				
<20	81	48.8	40	23.81
20-29	66	39.76	79	47.02
30-39	10	6.02	23	13.69
>39	9	5.42	24	14.29
Monthly Income				
<\$350	92	55.4	89	53
\$350-\$1,000	53	31.9	49	29.2
\$1,001-\$1,500	17	10.2	14	8.3
>\$1,500	4	2.4	16	9.5
Average Spending				
<\$30	75	45.2	83	49.4
\$31-\$60	68	41	54	32.1
\$61-\$100	14	8.4	19	11.3
>\$100	9	5.4	12	7.1
Product Category				
Fashion	93	22.63	95	20.3
Health & Beauty	86	20.92	72	15.38
Electronic devices & Accessories	60	14.6	78	16.67
Sport & Travel	54	13.14	68	14.53
Home & Lifestyle	32	7.79	47	10.04
Babies & Toys	24	5.84	11	2.35
Home appliances	23	5.6	41	8.76
Groceries & Pets	16	3.89	12	2.56
Others	14	3.41	25	5.34
Automotive	9	2.19	19	4.06

4. Data Analysis and Results

Reliability and Validity Analysis

Prior to testing the hypothesized relationships, the research instrument was not only evaluated for its internal consistency, composite reliability and convergent reliability but for its validity as well. The internal reliability (Cronbach's alpha) and composite reliability (CR) of all items measuring the constructs was above 0.8, thereby higher than the acceptable value of 0.7 as suggested by Fornell and Larcker (1981). In addition, the average variance extracted (AVE) also verified the convergent reliability of this research instrument since the AVE's scores exceeded the threshold value of 0.5 (Fornell & Larcker, 1981). In summary, all reliability scores were found satisfactory and adequate for further analysis. On a flip side, the validity was accessed through an exploratory factor analysis. For the principal component analysis as a factor extraction, Varimax was employed as a factor rotation method. Factors loadings are fully reported in Table 3. Once reliability and validity had been examined, the proposed hypotheses were tested by using Multiple regression analysis. The full analysis is presented in the next section.

Table 3: Reliability and Validity

	Factor loading		CR		AVE		Cronbach's	
	THA	IDN	THA	IDN	THA	IDN	THA	IDN
Web Informativeness			.823	.836	.509	.513	.899	.845
Web info 1	.758	.833						
Web info 2	.769	.707						
Web info 3	.840	.736						
Web info 4	.542	.722						
Web info 5	.537	.540						
Web Customization			.769	.795	.535	.572	.855	.760
Web cus 1	.842	.930						
Web cus 2	.537	.650						
Web cus 3	.780	.656						
Web Navigability			.785	.755	.553	.518	.831	.701
Web navi 1	.814	.501						
Web navi 2	.623	.842						
Web navi 3	.780	.772						
Web Aesthetic			.835	.808	.629	.590	.870	.896
Web aes 1	.764	.600						
Web aes 2	.777	.817						
Web aes 3	.837	.862						
Web Interaction			.868	.792	.687	.563	.896	.816
Web int 1	.823	.859						
Web int 2	.849	.710						
Web int 3	.816	.669						
Satisfaction			.896	.908	.743	.767	.906	.936
Satis 1	.852	.898						
Satis 2	.858	.871						
Satis 3	.877	.858						
Purchase Intention			.855	.879	.599	.647	.864	.890
PI 1	.735	.747						
PI 2	.847	.737						
PI 3	.833	.856						
PI 4	.667	.869						

Multiple Regression Analysis

The influence of all the independent variables (web informativeness, web customization, web navigability, web aesthetic, and web interaction on satisfaction and purchase intention) was identified through a multiple regression analysis. In order to perceive the nationality effect, the multiple regression analysis was performed separately for Thailand and Indonesia. The two sets of regression results are shown in Table 4.

Table 4: Multiple Regression Analysis

Path	Beta		t-value		p-value	
	THA	IDN	THA	IDN	THA	IDN
H1A Web informativeness → Satisfaction	.202	.378	2.803	4.805	.006	.000
H2A Web customization → Satisfaction	.79	.058	2.260	.784	.025	.434
H3A Web navigability → Satisfaction	.173	.205	2.286	2.999	.024	.003
H4A Web aesthetic → Satisfaction	.395	.026	5.290	.382	.000	.703
H5A Web interaction → Satisfaction	.010	.271	.183	3.936	.855	.000
Adjusted r squared: THA .754, IDN .677						
H1B Web informativeness → Purchase Intention	.267	.241	3.201	2.637	.002	.009
H2B Web customization → Purchase Intention	.082	.106	.894	1.224	.373	.223
H3B Web navigability → Purchase Intention	.065	.019	.746	.236	.457	.814
H4B Web aesthetic → Purchase Intention	.336	.327	3.885	4.110	.000	.000
H5B Web interaction → Purchase Intention	.186	.174	2.885	2.173	.004	.031
Adjusted r squared: THA .670, IDN .566						
H6 Satisfaction → Purchase Intention	.753	.687	14.644	12.195	.000	.000
Adjusted r squared: THA .564, IDN .469						

Within Thailand context, content design (both web informativeness and web customization) exhibited a significant influence on satisfaction. While only web navigability and web aesthetic impacted the formation of satisfaction, web interaction was not capable of explaining satisfaction. Among the influential roles of these independent variables, web customization contributed to user satisfaction the most ($\beta = .790$, $p = .025$), following by web aesthetic ($\beta = .395$, $p = .000$), web informativeness ($\beta = .202$, $p = .006$), and web navigability ($\beta = .173$, $p = .024$). Conversely, m-commerce in Indonesia showed different results. While web informativeness ($\beta = .378$, $p = .000$) proved to be an antecedent of satisfaction, web customization was not significantly related. Web navigability ($\beta = .205$, $p = .003$) remained important to the satisfaction in Indonesia context as it did in Thailand. In contrast to Thailand, web aesthetic had no influence over satisfaction while web interaction ($\beta = .271$, $p = .000$) became a significant factor influencing satisfaction.

On other matters, the role of content and non-content design on purchase intention in both countries was identical. Web aesthetic, web informativeness and web interaction were significantly related to purchased intention respectively. Even the standardized coefficient (β) suggested that web aesthetic have the greatest effect on purchase intention in a multiple regression model, web aesthetic was a stronger predictor of purchase intention in Thailand ($\beta = .336$) than Indonesia ($\beta = .327$). Neither web customization and web navigability significantly contributed to purchase intention, regardless of the country.

The last relationship in this multiple regression model was between satisfaction as the independent variable and purchase intention as the dependent variable. As expected, satisfaction strongly related to the purchase intention. However, the predictive power of satisfaction in Thailand ($\beta = .753$) was higher than in Indonesia ($\beta = .687$).

The overall results suggested that web informativeness and web navigability positively related to satisfaction in both countries. Web customization and web aesthetic contributed to satisfaction in Thailand but not in Indonesia. Conversely, web interaction was the only predictor of satisfaction in Indonesia. Regarding the antecedent of purchase intention, web informativeness, web aesthetic, and web interaction significantly explained the phenomenon of purchase intention in Thailand as well as in Indonesia. Lastly, satisfaction significantly and positively impacted purchase intention. This implies that each dimension of content and non-content design in m-commerce context plays a critical role in fostering customer satisfaction and its chain of effect on behavioral intention.

5. Discussion and Conclusion

Discussion and Implications of Results

The empirical results of this study contribute to the literature investigating the influence of web design in the m-commerce context in Thailand and Indonesian settings and fulfill research gaps in previous studies. Most of the proposed relationships have been confirmed showing the various impacts of web informativeness, web customization, web navigability, web aesthetic, and web interaction on satisfaction and purchase intention. In addition, these findings enhance the understanding of the interrelation among constructs.

The antecedents of purchase intention within m-commerce context were investigated by having Thailand and Indonesia as the research settings. In so doing, the analytical framework proposed to integrate content design (web informativeness and web customization), non-content design (web navigability, web aesthetic, web interaction), satisfaction and purchase intention. The differential roles of content and non-content designs across the two nations appear in Table 5 with the priority provided according to their beta values derived from Table 4.

Table 5: The Priority of Web Design Development in Thailand and Indonesia

Web Design → Users' Satisfaction	
Thailand	Indonesia
1 st : Web Aesthetic	1 st : Web Informativeness
2 nd : Web Informativeness	2 nd : Web Interaction
3 rd : Web Navigability	3 rd : Web Navigability
4 th : Web Customization	

Base on Table 5, web aesthetic was the strongest antecedent of Thai users' satisfaction following by web informativeness, web navigability, and web customization. However, web interaction is excluded from Table 5 due to its insignificant predictive power on Thai users' satisfaction. On the other hand, the top three factors affecting m-commerce users' satisfaction in Indonesia are web informativeness, web interaction, and web navigability. Web aesthetic and web customization were removed since they both had no significant effect on Indonesian users' satisfaction. The suggestion for m-commerce in Thailand and Indonesia is as follows:

The most contributory factor of Thai' user satisfaction was *web aesthetic*. The choice of colors should be considered when it comes to website design, together with the use of photos, moving images, and graphics whenever and wherever appropriated. However, the result shows that, to some extent, web aesthetic does not lead to user satisfaction in the Indonesian market. Therefore, the use of web aesthetic in Indonesia is omitted from this discussion. Web informativeness can result in higher satisfaction in Indonesia than in Thailand. Information presented in m-commerce should be well-crafted in order to provide what customers need while

minimize the costs associated with information searching in both countries. Therefore, each dimension of web informativeness, including but not limited to accuracy, completeness, understandability, timeliness, and availability, should be managed properly in both countries. More specifically, this implies that up-to-date, relevance, easy-to-understand, and complete information should be provided by retailers in Thailand and Indonesia in m-commerce marketplace to improve satisfaction as well as purchase intentions.

While Web interaction became the critical factor affecting satisfaction in Indonesia m-commerce context, it had no significant effect in the Thai context. Apart from the basic function of web interactivity, i.e., user generated content, retailers may consider using social commerce features where the key advantage of social media is adopted. With such web design, users are encouraged to share their shopping experience in their virtual community. Thus, the quality of web interaction can be enhanced through noncommercial-related information, i.e., ratings, reviews, and recommendations. In essence, operators in m-commerce should combine trading activities and social interaction within one platform and highlight the thesis of social shopping – the sharing of shopping experience among consumers and their social network.

Another determinant of satisfaction in both countries was web navigability. The presence of web navigability improves user satisfaction since it helps customers find merchandise and the required information. Web navigability should be used as assistance while customers virtually walk in an m-commerce site. The improvement of the navigability of an m-commerce website can be effectively done by the use of a browser tab and navigation bar, product categories, clear navigation titles, and search features usability. Even though web navigability preferences between Thai and Indonesian users are dissimilar, it is certain that a responsive design and mobile- user friendly experience should be created for both markets.

While web customization comes into a play as far as user satisfaction is concerned in Thailand, it has no significant effect on Indonesian users' satisfaction. This implies that retailers in m-commerce market should enhance the quality of their web customization, by simply going beyond the development of one-size-fits-all interfaces. E-retailers should allow users to customize their mobile shopping experience by configuring content and system functionality. Examples of web customization features include, but are not limited to, most frequent or recent visited pages and my favorite list/product function. Doing so would help to increase traffic, satisfaction, and purchase intention. The most contributory factor of Thai' user satisfaction was web aesthetic. The choice of colors should be considered when it comes to website design, together with the use of photos, moving images, and graphics whenever and wherever appropriate.

Limitations and Further Studies

There are some limitations to this research. First, the study was solely quantitatively conducted. In this respect, further studies can be improved by gaining insight from respondents through a qualitative or mixed methodology approach. Regarding the statistical analysis method, further studies should consider using advance statistics such as the structural equation modeling (SEM) to compare the model fit between two or more countries. Despite the comparative nature of this paper, the generalization of the results is restricted to only Thailand and Indonesia. The application of results in other research settings may require further analysis. Finally, since only content and non-content designs were examined, further research can also study the effect of other important factors influencing purchase intention such as, for example, online review, perceived trust, price, promotion, etc.

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Holistic View on Successful Aging: Life Course and Current Factors Determining Successful Aging in Thailand

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Abstract

Population aging is a global phenomenon. In Asia, it is rapidly affecting many countries, which are less prepared compared to Western countries even though the proportion of older adults and aging adults is considerably higher. This makes understanding the implications and the factors leading to successful aging critical. This study provides a holistic view on successful aging taking into account the denotation, measurement, and predictors of successful aging following the continuity theory. The study adds to the concept of successful aging by examining the relationships between the life course factors, current factors and successful aging. Specifically, the criteria of “success” is expanded to include life satisfaction, well-being, and self-actualization. Data was obtained from older adults residing in Thailand using Structural Equation Modeling (SEM). The major findings show that resilience and mental health maintenance could positively influence successful aging. This leaves room for governmental units and related institutions to implement more effective policies, not only for the current older adults but also for preparing the next generations to age successfully. Understanding and preparing well for an aging population are the key factors in ensuring and increasing successful aging.

Keywords: Successful Aging, Older Adults, Life Course Factors, Continuity Theory

1. Introduction

Successful aging is becoming an important topic as more people realize it could help them prepare for their retirement, health maintenance, and possible adversities as well as enable them to lead better lives in the future. In Western countries, successful aging is a common concept that has been studied widely as they have been dealing with aging populations for a long time. However, aging populations in Asian countries is much more recent, and the change dynamic and fast-paced with people having less experience. The number of older persons in Asia is expected to double from 535 million in 2015 to 1.3 billion in 2050 (United Nations ESCAP, 2015). Thailand is one of the fastest growing Asian countries facing population aging. ESCAP calculates that it will take Thailand only 22 years to move from an “aging society” to an “aged society” by 2024 (ESCAP, 2017). This means that Thailand, which had more than 10 percent of its population above 60 years in 2002, is projected to rise to 20 percent by 2024. This rapid demographic change could have an impact on national expenditures, productivity and more. Reforms are needed in various aspects regarding older adults’ finance, social engagement, physical and mental health. This research aims to develop a holistic view of successful aging model in the context of Thailand.

While a bigger proportion of the population is expecting to lead a longer life, the increase in lifespan does not automatically point toward better and functioning health, happiness, or life satisfaction in later years. With the older segment of the population steadily growing at a faster rate compared to other groups in the population, society is starting to pay attention to this group and improving healthy lifestyles (Lee, 2011). According to R.J. Havighurst (1961), “successful aging” is the most common term used to define the good old age and is also important to gerontology (Havighurst, 1963). People in Asian countries have a longer life expectancy but many of them are dealing with adversities in their later lives. For them the topic of successful aging is essential. This is especially true of Thailand, which needs to adapt swiftly to the rapid transformation. The attempt to identify the factors that are likely to ensure successful aging for older adults all the more relevant.

Research Questions and Objectives

Even though the Thai government has already started implementing plans for an aging society, the policies and commitment from all sectors – including older adults, families, private and public organizations – are still limited. The government expenditure concerning older people, such as the allowance for the elderly, government pension fund, and the social security fund, has been increasing in recent years with the tendencies to rise even more in the future (Thailand Development Research Institute, 2012). Although the government has already tried to solve the aging population issues by providing some financial support, wider variety of supports derived and based on the holistic view of successful aging are still needed. This leaves the gap for this research to investigate the factors that may cause older adults to have more opportunities and abilities to age successfully. The study contributes to the literature by studying the meaning, conceptualization and predictions under the subject of successful aging following the continuity theory.

The two main research questions are: (1) What are the important life-course factors, which can predict successful aging? (2) What are the important current factors determining successful aging in Thailand? The focus of this research is on both life-course and current factors of older adults, both of which can directly or indirectly influence successful aging. The target population of this study is older people residing in Thailand, where rapid economic development has given people longer life expectancy. The four main research objectives are:

1. to develop a model of successful aging in holistic view, including both life course factors and current socio-economic factors;
2. to apply the continuity theory to a successful aging model;
3. to understand and study older adults retiring in Thailand; and
4. to provide ideas for policy, project, or program recommendations regarding successful aging for use by governmental or private organizations.

2. Related Literature

Successful Aging

Historically, empirical research has focused on the negative aspects of aging such as death, disease, functional decline and disability (Strawbridge, Cohen, Shema, & Kaplan, 1996). The idea of people positively enjoying old age was wrong, and was denying the reality of aging (Cole, 1983). Later, Rowe and Kahn whose research differed from previous works in this area rebuilt the concept of successful aging. The widely-used model defined successful aging by three main factors: absence of disease, high degree of physical and cognitive functions, and active social engagement (Rowe & Kahn, 1997, 1998). Even though Rowe and Kahn’s model was widely used, there were also critiques as the model mainly focused on disease-free older age. Baltes claimed that Rowe and Kahn’s idea of current health state may be too idealistic (P.

B. Baltes & Baltes, 1990). Sociological and psychological approaches look at ‘successful aging’ in a more meaningful way i.e., searching for the conceptions of well-being and also continued growth even in old age. The life course approach is considered to improve the model whereby aging is viewed as a process, which includes historical time, context and other developments into the model (Stowe & Cooney, 2014). Successful aging could be viewed as a dynamic process or as the outcome of one’s development over the life course (Carol D. Ryff, 1989). To conclude, there are various definitions, concepts and measurements regarding successful aging. This is consistent with the explanation from Pruchno, Wilson-Genderson, & Cartwright (Pruchno, Wilson-Genderson, & Cartwright, 2010). However, even with numerous papers on successful aging, there is still no clear consensus on this topic. In this study, the researchers decided not to count on one specific model but to use a more holistic conceptual view that includes both life course and current factors to understand successful aging.

Continuity Theory

There are three main psychosocial theories relating to successful aging and social functioning. They describe how people develop in old age and include the disengagement theory, the activity theory, and the continuity theory (Havighurst, Neugarten, & Tobin, 1968). The main theory used in this study is continuity theory. The disengagement theory explains that it is normal and acceptable that older adults will withdraw from society (Cumming & Henry, 1961). The activity theory is also known as the normal theory of aging, or sometimes as the implicit theory of aging, or the lay theory of aging (Loue, 2008). The theory was developed by Robert J. Havighurst in 1961. He proposed that successful aging occurs when older adults stay socially active. The aging process will be delayed and the quality of life will be improved when older adults maintain the social interactions such as personal relationships and activities (Schulz, 2006). The continuity theory explains that older adults will usually maintain the same activities, behaviors, relationships as they did when they were younger.

This theory stipulates that older adults will continue their lifestyles, which are related to their past experiences using an adaptive strategy (Atchley, 1971). Atchley (1989) proposed the continuity theory in 1989, explaining that people who grow older can successfully carry on their values, lifestyles and relationships from middle to later life. This theory is applied as the main theory in this study and is about the way older adults deal with changes they face when aging. As personality remains comparatively continual throughout aging and one’s life course (Markson, 2003), scholars also explain in a similar way that people are motivated to adapt and continue their typical patterns of activity (Nimrod & Kleiber, 2007). Therefore, the researchers applied the continuity theory as a main theory in this study to reinforce the idea that what the older adults have attained in their life course, they will find ways to continue so they can experience successful aging. Even when faced with decline in health, they will develop activity patterns, which can help maintain or regain their health, leading to successful aging.

Happiness in Later Years: Life Satisfaction, Well-Being, and Self-Actualization

Finding the measurement of successful aging is not easy. A person who lives the longest is the most likely to have faced the most losses such as loss of friends or health. A person striving too much for self-sufficiency also loses social engagement (M. M. Baltes & Carstensen, 1996). So how to measure if a person ages successfully? The most commonly investigated definition of successful aging is happiness and life satisfaction over one’s past and present life (Havighurst, 1963). As people lead their lives, individuals subjectively assess their life’s conditions as to feelings they have of satisfaction or dissatisfaction. Life satisfaction can be measured by the Satisfaction With Life Scale-SWLS (Pavot & Diener, 1993).

Psychologists commonly used life satisfaction and appraisal of well-being to operationalize successful aging (M. M. Baltes & Carstensen, 1996). Both life satisfaction (Andrews, 1986; Andrews & Withey, 2012) and well-being (Glass, 2003) are also most frequently proposed and studied for the component regarding quality of life. In 2011, Seligman discussed five core elements of well-being: PERMA (positive emotion, engagement, relationships, meaning and accomplishment) (Seligman, 2012). Seligman believes that these five elements can bring fulfillment, happiness and meaning to people. The scale from PERMA model of well-being will be used later to measure one of the aspects of successful aging.

The last indicator for successful aging in this study is self-actualization. According to Baltes and Silverberg (1994), self-actualization is also used as one of the measurements of successful aging. According to Maslow's hierarchy of needs model; there are five levels of human's motivational needs; physiological, safety, love, esteem and self-actualization (A. Maslow, 1954; A. H. Maslow, 1943) Maslow believed that a person has a potential to satisfy these needs. The lower levels of basic needs have to be fulfilled before reaching the higher levels. The highest level of the model is self-actualization which is the need for personal growth and finding a meaning of life that is important to the person (A. H. Maslow, 1962). In this study, the measurements of life satisfaction, well-being and self-actualization will be used to represent 'successful aging'. All these indicators are not focused on measuring how long people can live but rather on how much life is added to their years. It is about how an older person can live happily, with wellness and continue to be true to themselves throughout their lives.

3. Methodology

Research Model

This research aims to test seven hypotheses (H1-H7) as shown in Figure 1. Each hypothesis states the direction of each exogenous variable influencing the endogenous variables as follows:

H1: Personal-achievement profile has a positive relationship with current behavior and status.

H1a: Personal-achievement profile has a positive relationship with current health behavior.

H1b: Personal-achievement profile has a positive relationship with current financial well-being.

H1c: Personal-achievement profile has a positive relationship with current social engagement.

Identifying H1: The better the personal achievement profile in education, career, income and social engagement, the more significantly it relates to current health behavior, financial well-being and social engagement.

H2: Resilience has a positive relationship with current behavior and status.

H2a: Resilience has a positive relationship with current health behavior.

H2b: Resilience has a positive relationship with current financial well-being.

H2c: Resilience has a positive relationship with current social engagement.

Identifying H2: The better the resilience, the more significantly it relates to current health behavior, financial well-being and social engagement.

H3: Resilience has a positive relationship with health maintenance.

H3a: Resilience has a positive relationship with physical health maintenance.

H3b: Resilience has a positive relationship with mental health maintenance.

Identifying H3: The better the resilience, the more significantly it relates to physical and mental health maintenance.

H4: Current behavior and status have a positive relationship with health maintenance.

H4a: Current health behavior has a positive relationship with physical health maintenance.

H4b: Current financial well-being has a positive relationship with physical health maintenance.

H4c: Current social engagement has a positive relationship with physical health maintenance.

H4d: Current health behavior has a positive relationship with mental health maintenance.

H4e: Current financial well-being has a positive relationship with mental health maintenance.

H4f: Current social engagement has a positive relationship with mental health maintenance.

Identifying H4: The better the current health behavior, financial well-being and social engagement, the more significantly it relates to physical health maintenance and mental health maintenance.

H5: Personal-achievement profile has a positive relationship with successful aging.

H5a: Personal-achievement profile has a positive relationship with life satisfaction and well-being.

H5b: Personal-achievement profile has a positive relationship with self-actualization.

Identifying H5: The better the personal achievement profile in education, career, income and social engagement, the more significantly it relates to life satisfaction, well-being and self-actualization.

H6: Resilience has a positive relationship with successful aging.

H6a: Resilience has a positive relationship with life satisfaction and well-being.

H6b: Resilience has a positive relationship with self-actualization.

Identifying H6: The better resilience, the more significantly it relates to life satisfaction, well-being and self-actualization.

H7: Health maintenance has a positive relationship with successful aging.

H7a: Physical health maintenance has a positive relationship with life satisfaction and well-being.

H7b: Physical health maintenance has a positive relationship with self-actualization.

H7c: Mental health maintenance has a positive relationship with life satisfaction and well-being.

H7d: Mental health maintenance has a positive relationship with self-actualization.

Identifying H7: The better the physical maintenance and mental maintenance, the more significantly it relates to life satisfaction, well-being and self-actualization.

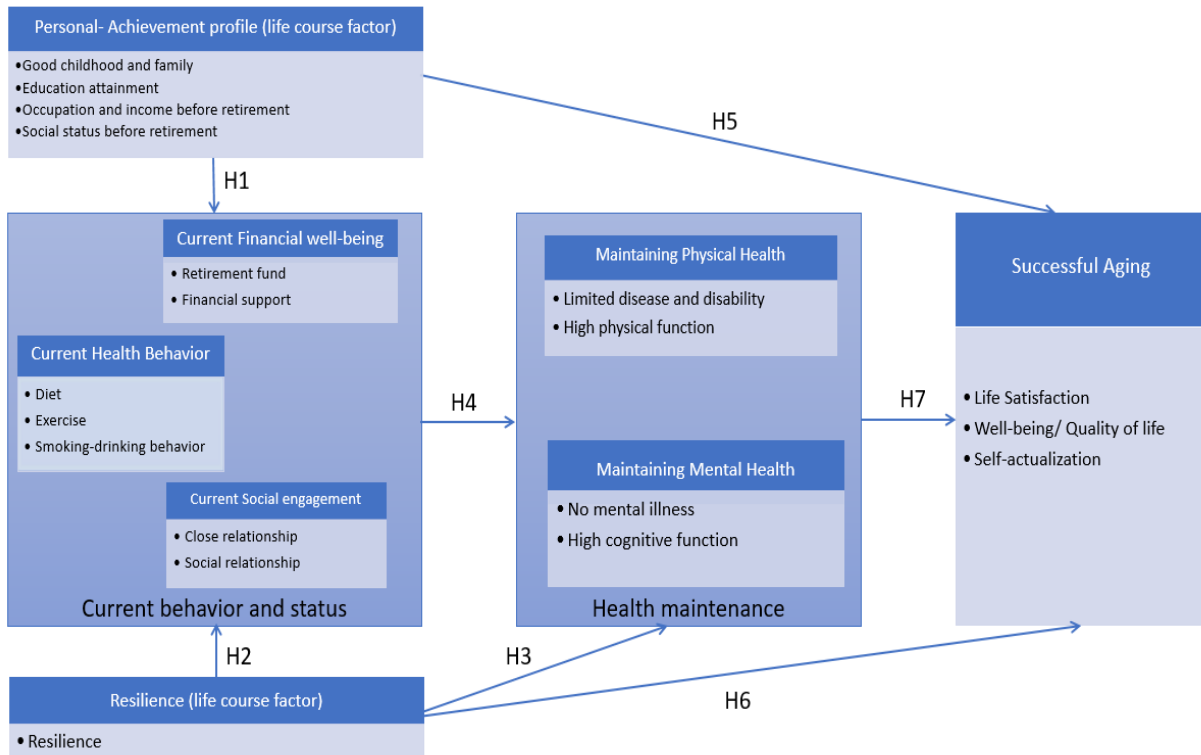


Figure 1: Research Model

This research studies life course factors and current factors that could influence the successful aging directly and through health maintenance of older adults in Thailand, thus, quantitative approach is justified. Survey questionnaires were used to collect data. The survey questionnaires were provided in close-ended questions so that the collected data can be converted into statistical numbers. Before distributing the questionnaires, the subjects would be asked a few questions in order to make sure they were eligible according to the above criteria. The questionnaires were distributed to older adults in Thailand who are at least 60 years old residing in Bangkok or greater Bangkok and selected major provinces. The quota sampling technique was used in this study as they were distributed in six major provinces in Thailand. This technique allowed researchers to sample subgroups that are interesting to the study. The target samples are from various backgrounds, especially the older adults who are still active with the ages around 60-69 years old.

The research was conducted at the research participants' houses, workplaces and other public places during June to November 2018. The sample size of this research calculated according to Yamane is 400 sets of survey questionnaires (Yamane, 1964), in order to achieve 95% confidential level and 5% precision or significant level. The response rate of 80 percent was higher than the expectation. From approximately 650 questionnaires distributed, 520 fully-completed questionnaires were used as samples of this research study. The data was analyzed by the Statistic Package for Social Sciences- Amos program. Before the structural equation modeling; the exploratory factor analysis was used to reduce the number of questions from 84 to 48 questions. The factor loading ranged between 1.007 and 0.379, thereby satisfying the validity for large sample size. Validity and Reliability analyses were completed to ensure that the questions in the questionnaire were content-related and appropriate for the measurement of this study. The questions were hypothetically constructed as they rely on the main hypotheses. For reliability analysis, the researchers assessed Cronbach's Alpha analysis, which resulted from 0.745 to 0.965, and since it is greater than 0.7, it is considered reliable.

4. Research Findings and Hypothesis Testing

From 650 questionnaires distributed, 520 were fully completed, returned, and used as representative of the population for this study. The research found that the larger numbers of the respondents are female. In terms of genders: 62.7% are female, 37.3% are male. The proportion is higher in the woman group. The biggest age segment is the 60-64 years old at 52.30%, while another group of 65-69 years old is also a large segment at 27.88%. Regarding the marital status; 69.2% are married, 17.7% are divorced or widows and only 13.1% are single.

This shows that a large number of older adults in Thailand still live with their spouses and children as well as living in a big family and constitutes 54.5%. Other 38.5% live with someone such as their lovers, friends or siblings. Only 6.9% reported that they live alone. In terms of the highest level of education achieved, the largest group of 41% received degrees from higher vocational school and bachelor degree. Regarding the occupation, the largest group of 31.7% is government officials or office employees, and the second largest group of 20% is traders, technicians, or farmers. After retirement, 35.4% retired at home but 24.2% still work full-time. And lastly, the largest segment (25.2%) have monthly income of 15,000-30,000THB and 22.3% have the estimated family income of 50,001-100,000THB per month.

For the structural model (figure 2), Personal-achievement profiles (PROFILE) and resilience (RES) were the exogenous variables. Five groups were partial exogenous and endogenous variables including health behavior (HEALTH), financial status (FN), social engagement (SOC), physical health maintenance (PH_MAIN), and mental health maintenance (M_MAIN). The remaining two variables, life satisfaction and well-being (SA1) and self-actualization (SA2) were the endogenous variables.

Life satisfaction and well-being were grouped together (SA1) because of their high correlation. Many literatures also defined well-being as life-satisfaction. The examples include the life satisfaction index (LSI) which was developed as part of Kansas City study of Adult Life (Neugarten, Havighurst, & Tobin, 1961) measuring a person's own assessment of his or her psychological well-being (Carol D Ryff, 1989). The inter correlations of Ryff's new measurement of well-being and the prior life satisfaction were also significantly positive (Carol D Ryff, 1989).

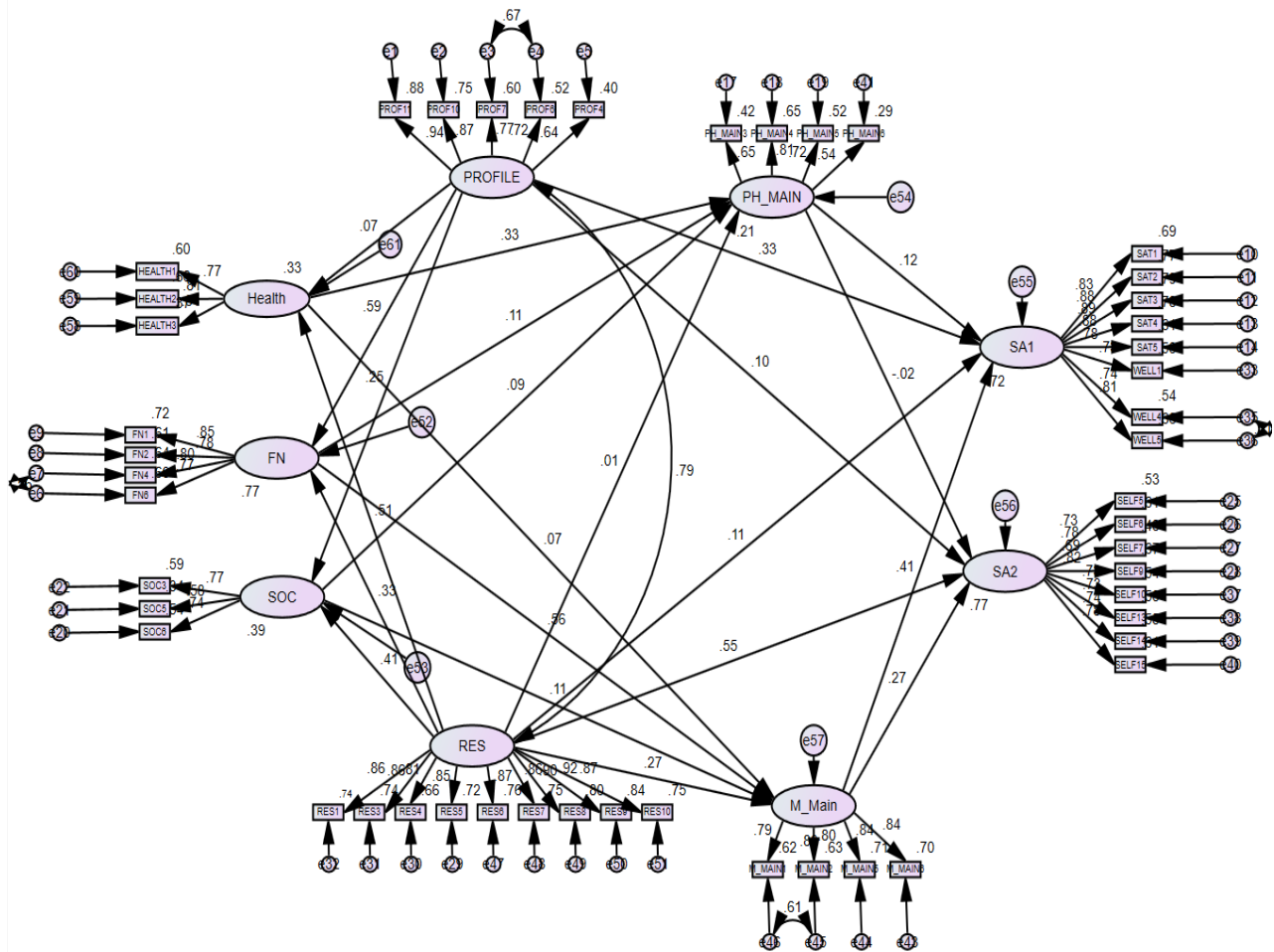


Figure 2: Structural Model

The model fit considered many literatures discussing the cut-off and the standard of the covariance-based model. According to Hair and other scholars, CFI more than 0.9 means satisfactory fit (Awang, 2012; Hair, Black, Babin, & Anderson, 2009). For TLI, scholars considered TLI of at least 0.9 to be satisfactory fit (Awang, 2012; Forza & Filippini, 1998). For NFI, Awang explained NFI to be at least 0.9 to be satisfactory (Awang, 2012). However, Forza and Filippini considered NFI between 0.8 to 0.9 as acceptable fit (Forza & Filippini, 1998). Conferring to Awang, RMSEA should be less than 0.08 (Awang, 2012). From the statistic results, the model solution is considered good model-fit considering incremental fit (TLI rho2 = 0.914, and CFI = 0.920) and absolute fit (RMSEA = 0.056 < 0.06).

Baseline Comparison	IFI Delta2	TLI rho2	CFI	RMSEA
Default Model	0.920	0.914	0.920	0.056
Saturated Model	1.000		1.000	-
Independence Model	.000	.000	.000	0.191

Hypothesis 1

H1: Personal-achievement profile has a positive relationship with current behavior and status.

H1	Sub-hypotheses	Endogenous Variables	Estimate	P	Significantly support H	Result
H1a	Personal-achievement profile	Current health behavior	0.051	0.354	Not supported	Partially supported
H1b		Current financial well-being	0.606	***	Supported	
H1c		Current social engagement	0.262	0.001	Supported	

The research findings in this study indicate that personal-achievement profile is the exogenous variable that significantly affects the current financial well-being and current social engagement (H1b: estimate = 0.606, $p < 0.05$ & H1c: estimate = 0.262, $p < 0.05$). However, there is no relationship between personal-achievement profile and current health behavior. This concludes that there is partial relationship between personal-achievement profile and current behavior status.

Hypothesis 2

H2: Resilience has a positive relationship with current behavior and status.

H2	Sub-hypotheses	Endogenous Variables	Estimate	P	Significantly support H	Result
H2a	Resilience	Current health behavior	0.388	***	Supported	Supported
H2b		Current financial well-being	0.369	***	Supported	
H2c		Current social engagement	0.456	***	Supported	

The research findings in this study indicate that resilience is the exogenous variable that significantly affects current health behavior, current financial well-being, and current social engagement (H2a: estimate = 0.388, $p < 0.05$ & H2b: estimate = 0.369, $p < 0.05$, & H2c: estimate = 0.456, $p < 0.05$). This study proves that resilience is significantly positive towards current behavior and status of the older adults. This concludes that resilience can significantly affect all current behavior status.

Hypothesis**3**

H3: Resilience has a positive relationship with health maintenance.

H3	Sub-hypotheses	Endogenous Variables	Estimate	P	Significantly support H	Result
H3a	Resilience	Physical health maintenance	0.009	0.905	Not supported	Partially supported
H3b		Mental health maintenance	0.266	***	Supported	

The research findings in this study indicate that resilience is the exogenous variable that significantly affects mental health maintenance (H3b: estimate = 0.266, $p < 0.05$). However, there is no relationship between resilience and physical health maintenance. This concludes that there is a partial relationship between resilience and health maintenance.

Hypothesis 4

H4: Current behavior and status have a positive relationship with health maintenance.

H4	Sub-hypotheses	Endogenous Variables	Estimate	P	Significantly support H	Result
H4a	Current health behavior	Physical health maintenance	0.324	***	Supported	Partially supported
H4b	Current financial well-being		0.075	0.213	Not supported	
H4c	Current social engagement		0.061	0.188	Not supported	
H4d	Current health behavior	Mental health maintenance	0.091	0.057	Not supported	
H4e	Current financial well-being		0.499	***	Supported	
H4f	Current social engagement		0.100	0.005	Supported	

The research findings in this study indicate that current health behavior is the only variable that significantly affects physical health maintenance (H4a: estimate = 0.324, $p < 0.05$). However, there is no relationship between current financial well-being and current social engagement towards physical health maintenance. The finding is in contrast for mental health maintenance. The result indicates that current financial well-being and current social engagements are the variables that significantly affect mental health maintenance (H4e: estimate = 0.499, $p < 0.05$ & H4f: estimate = 0.100, $p < 0.05$). Nevertheless, there is no relationship between current health behavior and mental health maintenance. This concludes that there is a partial relationship between current behavior status and health maintenance.

Hypothesis 5

H5: Personal-achievement profile has a positive relationship with successful aging.

H5	Sub-hypotheses	Dependent Variables	Estimate	P	Significantly support H	Result
H5a	Personal-achievement profile	Life satisfaction and well-being	0.295	***	Supported	Partially supported
H5b		Self-actualization	0.078	0.056	Not supported	

The research findings in this study indicate that personal-achievement profile can significantly affect only life satisfaction and well-being (H5a: estimate = 0.295, $p < 0.05$). However, there is no relationship between personal-achievement profile and self-actualization. This concludes that there is a partial relationship between personal-achievement profile and successful aging.

Hypothesis 6

H6: Resilience has a positive relationship with successful aging.

H6	Sub-hypotheses	Dependent Variables	Estimate	P	Significantly support H	Result
H6a	Resilience	Life satisfaction and well-being	0.104	0.078	Not supported	Partially supported
H6b		Self-actualization	0.449	***	Supported	

The research findings in this study indicate that resilience can significantly affect only self-actualization (H6b: estimate = 0.449, $p < 0.05$). However, there is no relationship between resilience towards life satisfaction and well-being. This concludes that there is a partial relationship between resilience and successful aging.

Hypothesis 7

H7: Health maintenance has a positive relationship with successful aging.

H7	Sub-hypotheses	Dependent Variables	Estimate	P	Significantly support H	Result
H7a	Physical health maintenance	Life satisfaction and well-being	0.158	***	Supported	Partially supported
H7b		Self-actualization	-0.021	0.545	Not supported	
H7c	Mental health maintenance	Life satisfaction and well-being	0.408	***	Supported	
H7d		Self-actualization	0.225	***	Supported	

The research findings in this study indicate that physical health maintenance is the variable that significantly affects life satisfaction and well-being (H7a: estimate = 0.158, $p < 0.05$). However, there is no relationship between physical health maintenance towards self-actualization. The finding is different for mental health maintenance. The result shows that mental health maintenance is significantly positive towards life satisfaction and well-being as well as self-actualization (H7c: estimate = 0.408, $p < 0.05$ & H7d: estimate = 0.225, $p < 0.05$). This study proves that mental health maintenance can significantly affect all aspects of successful aging. This concludes that there is a partial relationship between resilience and successful aging. Apart from answering research questions, there are other beneficial findings from our detailed study. Eight questions in the questionnaires measured the successful aging in terms of life satisfaction and well-being; moreover, the other eight questions were used to measure successful aging in term of self-actualization.

For life satisfaction and well-being, the respondents rated themselves as having the highest score in having the sentiment of being joyful, positive, content and satisfied with their lives with the score of 4.63 and 4.58 out of 6. Conversely, they rated themselves lowest when asked if they have any desires to change anything if they could live their lives over with the score of 4.01 out of 6. From these findings, we conclude that even though older adults feel quite satisfied and content with their lives, there is still a clear sign that change is needed. For self-actualization, the respondents rated themselves as having the highest score in terms of being loved and the ability to accept their own weaknesses with the score of 4.68 and 4.66 out of 6. Conversely, they rated themselves lowest in terms of the attempt to analyze and simplify complex task with the score of 4.18 out of 6. From these findings, it can reflect that the older adults perceived themselves as being loved, can give love and also can accept their flaws; however, their endeavors in completing the complicated job are not high.

5. Summary and Concluding Remarks

The growth of aging population in Asian countries is rapid and dynamic. A large proportion of people are in or entering into this older age group whereby the interest of successful aging is raised. While having a good old age is relevant to everyone especially the older adults, there were limited numbers of researches in Thailand who studied about successful aging, therefore, this research was conducted to fill the gap. With various definitions of successful aging and uni-dimensional models in the academic field, the definition of successful aging remains unclear and still lacks the insight from older people. Due to the mentioned reasons, this research explores the holistic view of successful aging including both life course and current factors in the context of Thailand.

The four main objectives of this research are to:

- 1) to develop a model of successful aging in holistic view including both life course factors and current socio-economic factors;
- 2) to apply continuity theory to successful aging model;
- 3) to understand and study older adults retiring in Thailand as Thailand was used as the center of this study;
- 4) to give the idea for policy, project, or program recommendations regarding successful aging for governmental or private organizations.

The research findings show that current behaviors and status are partially and significantly affected by the personal-achievement profile. The current financial well-being and current social engagement are positively influenced by personal-achievement profile. This means the older adults' good life history can affect present stages. Moreover, current behavior and status of older adults is significantly influenced by resilience. Resilience has significant positive relationship on the current health behavior, current financial well-being, and also social engagement. For health maintenance, only mental health maintenance is significantly influenced by resilience. Mental health can also be significantly affected by current financial well-being and current social well-being. Physical health is significantly affected by current health behavior. Lastly, personal-achievement profile can significantly lead to life satisfaction and well-being whereas resilience can significantly lead to self-actualization. For health maintenance, physical health maintenance can only lead to life satisfaction and well-being. However, mental health maintenance can lead to life satisfaction, well-being and self-actualization.

From our results, important factors such as resilience and mental health maintenance can positively influence successful aging. This study supports the important issue that older adults in Thailand can age successfully if they have sufficient support in their life courses which could bring them better current status and health maintenance. However, such improvement provide good opportunities for responsible governmental units, and/or institutions to implement more effective programs for older adults. The idea to start preparing for a good old age when a person starts getting older has to be changed. Successful aging does not happen overnight. Policy makers should see the potential of promoting resilience as the way to help older adults cope with the difficulties in later stage of their lives. Also, the policies which promote good mental health maintenance could provide more tendencies for older adults to access all aspects of successful aging. As this research focuses only on quantitative aspects; this could be the limitation of the research, but at the same time leaves the gap for additional research to explore a more qualitative view. Additional research could also apply in larger-scaled perspective to increase the tendency of successful aging.

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Drivers for Sustainable Community Capacity Building: A Case Study of ECO-LIFE Initiatives in Malaysia and Thailand

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Abstract

The importance of community capacity building (CCB) has long been known but it has specific relevance to the developing world. CCB focuses on enabling all members of the community, including the poorest and the most disadvantaged, to develop skills and competencies so as to take greater control of their own lives. CCB contributes to local development and involves local leadership. Not only can communities be more cohesive but they can also be more resilient and better placed to confront economic and social challenges. Although many community-building projects are generally modest local activities that people pursue with no government support, meaningful and effective CCB can be stimulated and fostered by government agencies and the capacity which communities have already developed. The result is that power becomes increasingly embedded within them. This empirical study discusses two cross-national CCB showcases of good practice where shared value community-development projects were supported by government agencies. More specifically, in light of insightful interviews with community members, it investigates CCB activities, outcomes, and enablers in these two scenarios and explores drivers for sustainable CCB involvement in a community. The research output is resources for the relevant authorities to design and implement strategies to build, rebuild and sustain community capacity. The findings also contribute to the knowledge base about creating shared value with community projects.

Keywords: Community capacity building, sustainable community development, enablers of CCB, eco-life initiatives, shared value creation, community volunteerism

1. Introduction

The world has been facing major industrial changes. Take for example the 2008 financial crisis and the global recession that followed. It has led to dramatic organization restructures and to the closing of large industrial facilities and a number of other major employment sites. Such developments often combine with steady economic decline. As a result, many towns and regions are looking for new economic purposes, new specializations, greater diversification, and new forms of entrepreneurship. There is, however, a danger that the most fragile locations in the developed and developing world will bear a disproportionate brunt of such recurring slowdowns. Unemployment and business closures are rising fastest in those areas where joblessness and low business activity have been problematic. Furthermore, localities emerging from political conflicts and divisions often remain fragile for generations. Poverty, exclusion and joblessness are inherent in affected communities and tend to be exacerbated at times of economic downturns. The term community has come to mean many different things to many different people.

Portney (2003) defines a community as anything from a small neighborhood, to a group of people who share interests, to a program operated by a governmental or nongovernmental organization, to a rather localized ecosystem or a multistate region encompassing numerous ecosystems. Communities offer a mediating force linking the micro level of the individual and the macro economic, political and cultural structures that shape society (Robertson & Minkler, 1994). The key point is that communities can be protective and reduce the impact that poverty, institutional racism and other sources of structural disadvantage may have. Previous studies have found that strong communities possess the skills, resources and networks to advocate effectively for services, are better prepared to respond to disasters and other uncertainties, and possess the capacity to absorb resulting change (Magis, 2010; Veenstra, 2002). Strong communities can be more effective proponents than individuals in preventing the erosion of existing services due to the skills, resources, and networks they possess and can leverage them in times of need (Magis, 2010; Veenstra, 2002; Barnett and Barnett, 2003; Kearns et al., 2009). The realities in the world today such as those described above are a central part of the rationale for continuing and expanding the work on community capacity building (CCB).

CCB has developed as a concept because of the need for strategies to address major social and economic declines in towns and regions experiencing significant economic change and the consequences of deep-seated and long-term joblessness and benefits dependency. Skinner (2006) defined CCB as activities, resources and support that strengthen the skills, abilities and confidence of people and community groups to take effective action and leading roles in the development of communities. There are, however, debates about the similarities and differences between CCB and community development (Craig, 2007; Verity, 2007). Some writers nevertheless use the terms interchangeably. But some see CCB as a more evolved form of community development. The Scottish Community Development Centre argues that CCB is one of the twin pillars of community development (the other pillar is community engagement). Every society, every community and every person has skills, strengths and the capacity to problem solve, act creatively and work together for the benefit of their communities.

Chaskin (2001) defined community capacity as the interaction of human capital, organizational resources, and social capital existing within a given community that can be leveraged to solve collective problems and improve or maintain the wellbeing of a given community. It may operate through informal social processes and/or organized effort. The fundamental characteristics of community capacity are a sense of community, a level of commitment among community members, the ability to solve problems and access to resources, which are present in some capacity in all communities (Labonte & Laverack, 2001). Community capacity has gained prominence as a prerequisite for successful health promotion programs and as a critical component of resilience in the disaster planning and environmental literature (Hawe et al., 1997; Magis, 2010). The term community capacity is informed by concepts such as community empowerment and competence (Goodman et al., 1998; Smith et al., 2006). Health promoters have sought to build community capacity as a parallel track to the programs they implement, recognizing the approach will empower the communities they work with and encourage support and buy-in beyond the funded life of a program (Hawe et al., 1998).

Study Objectives

Since the two authors are based in Malaysia and Thailand, a case of good CCB practice has been purposefully selected in each national setting: one at a workplace and the other at an education institute. Although the two cross-national cases are in different contexts, they share being value community projects. Both projects are eco-life initiatives in eco-farming, composting, recycling and sustainable organic gardening. Eco-life is a concept of living which is environmentally friendly and pursues activities that will keep the balance of the Ecosystem.

A quick browse on the internet reveal terms like green, natural, minimalism and eco-living have been gathering significant popularity in recent years. Greenhouse gases (GHG) emitted by human activities are considered one of the major causes of climatic change (Smith, 2006). Developing countries are projected to be responsible for approximately 61 % of global GHG emissions by the year 2030 (Koh et al., 2011). As rapidly developing countries, Malaysia and Thailand rank among the top 40 GHG emitting countries (EU EDGAR database). Among GHG mitigation approaches, the Low Carbon Society (LCS) approach is a holistic idea that calls for behavioral changes among people. Its goal is to reduce GHG emissions to levels that can be naturally absorbed (MOEJ, 2007).

The LCS approach is particularly relevant for urban areas which have GHG emitting sectors in greater numbers. There are several arguments to support the notion that local government bodies managing urban areas have a leadership role to play in transforming urban societies to low carbon societies (APEC, 2010). LCS strategies are best implemented through local government as they can solve problems that arise due to local circumstances more efficiently. They have an official administrative duty to manage their city and work closely with local population (Larsen & Gunnarsson-Ostling 2009; Orlansky 2000).

The two projects are located in cities where major sources of GHG-emitting activities are found. Both projects have been selected as CCB showcases supported by local government agencies and both have attained self-sustenance. All project leaders and supporters are volunteers with no personal tangible benefits from their involvement in CCB activities. The research objectives are to investigate:

1. the CCB activities at the communities;
2. the outcomes of CCB at the communities; and
3. the enablers of CCB at the communities.

It is the aim of this study to determine from the research findings the contributions of CCB to the community and provide a richer picture of the motivations of community members and their continuous involvement with CCB activities.

2. Conceptual Background

Community Capacity Building

Building community capacity is the national priority of many nations facing adverse economic situations and prospects. Many neighborhoods require economic and social strategies to build, or rebuild local communities and economies. There are also places where capacity building strategies can help to build economic and social assets during long-term growth phases (OECD, 2009). By building capacity, communities will generally be in a better position to meet the challenges of crisis and be more resilient to economic downturns. Better jobs, increased levels of entrepreneurship, positive social capital indicators, business performance and sustainability are all potential indicators of the resilience which increased community capacity can bring to local areas.

However, there are also major tensions between national, regional and local governments to develop strategies that build, rebuild and preserve economic and social infrastructure in communities (OECD, 2009). Balancing national and local priorities is always difficult but in the present economic and political circumstances it is an even greater challenge. CCB has been used as political rhetoric (Craig, 2007). The term “community development” is applied uncritically to a very wide range of activities, many of which have little to do with development. Another fundamental critique of CCB is that it is based on the notion of communities being deficient in skills, knowledge and experience instead of focusing on the capacities that they do have (Craig, 2007). It is a missed opportunity to recognize and capitalize on the ‘core-strengths’ of the communities.

Nevertheless, there is still a widespread appetite amongst governments to act decisively at both local and national levels in the current macro environment. There is a need to find an appropriate balance between these sometimes competing objectives. The priorities at all spatial levels are to build community capacity, to rebuild capacity in deprived cities and regions, and to sustain such activity in difficult economic times. Jobs, entrepreneurship and business performance are key tangible areas to which CCB can contribute, and this is accompanied by more intangible factors including increased social capital and social cohesion.

Social Capital

Social capital has a variety of definitions. Dekker and Uslaner (2001) determined that social capital is about the value of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity. Fukuyama (1995) defined social capital simply as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them. Social cohesion brings about shared purpose which is essential to successful community development where people within a community converge and develop a sense of togetherness. This corresponds to an age-old sociological wisdom about society being the product of social interaction. The commonalities of most definitions are that they focus on social relations that have productive benefits (Claridge, 2004). Social support and community connectedness are key determinants of both mental and physical wellbeing and many researchers have applied the concept of social capital and social cohesion to gain insight into the nature of collective social relationships (Kawachi et al., 2004; Szreter & Woolcock, 2004).

Community Capacity Building Activities and Outcomes

British Columbia Healthy Communities Society (BCHCS) posits that capacity building involves a number of activities, including:

1. *Community Learning*: Learning in community develops over time as people share common pursuits and goals. As conditions shift and new issues emerge, thriving communities are able to learn quickly and draw upon local experiences to create local knowledge.
2. *Expanding Community Assets*: Healthy communities foster the development of both tangible and intangible assets.
 - Tangible assets: financial capital, physical capital (e.g., infrastructure) and organizational development.
 - Intangible assets: social capital (relationships and networks), human capital (e.g., skills, knowledge and confidence), shared goals and values, and leadership
3. *Community Collaboration*: As communities increasingly “connect the dots” between issues, they also need to increase capacity to think and act in collaborative ways that seek and expand common ground, shape a desired future, and encourage joint ownership over the issues at hand. Successful collaborations require time to build trust, relationships, and agreements about what to do together and how to choose to do things.

Table 1 shows the list of common types of nonprofit making capability building activities developed by McNemara (2006)

Table 1: Common Types of Capacity Building Activities ((Adapted from McNemara, 2006)

1. Assessments	2. Leadership Development
3. Board Development	4. Management Development
5. Business Planning	6. Marketing and Promotions
7. Business Development	8. Mergers
9. Collaboration Planning	10. Network Opportunities
11. Conflict Resolution	12. Peer Learning
13. Convening	14. Organizational Development
15. Earned-Income Development	16. Program Design
17. Evaluation	18. Project Management
19. Facilities planning	20. Quality Management
21. Financial management	22. Risk Management
23. Funding	24. Research
25. Fundraising	26. Referrals
27. Information Technology	28. Strategic Planning
29. Legal	30. Team Building
31. Meeting management	32. Staff Selection and Development

CCB Measurement Concepts

Today, CCB is included in the programs of most international organizations that work in development, including the World Bank, the United Nations and non-governmental organizations such as Oxfam International. The Aspen Institute (1996) identifies three simple measurement concepts for CCB: outcomes, indicators and measures, and defines them as follows:

- An outcome is a major change in the lives of people and/or their community, which proves that CCB is happening.
- An indicator is an actual activity or capacity that we can measure or assess in some way that shows that an outcome is being achieved.
- A measure is the actual bean-counting, or some kind of analysis that must be done in order to measure an indicator.

CCB Outcomes

The bottom line for CCB is its outcomes. Table 2 shows the eight outcomes listed by the Aspen Institute (1996).

Table 2: Community Capacity Building: Eight Outcomes (Adapted from Aspen Institute 1996)

Outcome		Rationale
1	Expanding, diverse, inclusive citizen participation	In a community where capacity is being built, an ever-increasing number of people participate in all types of activities and decisions. These folks include all the different parts of the community and also represent its diversity.
2	Expanding leadership base	Community leaders that bring new people into decision-making are building community capacity. But the chance to get skills and to practice and learn leadership are also important parts of the leadership base.
3	Strengthened individual skills	A community that uses all kinds of resources to create opportunities for individual skills development is building community capacity in an important way. As individuals develop new skills and expertise, the level of volunteer service is raised.
4	Widely shared understanding and vision	Creating a vision of the best community future is an important part of planning. But in community capacity building, the emphasis is on how widely that vision is shared. Getting to agreement on that vision is a process that builds community capacity.
5	Strategic community agenda	When clubs and organizations consider changes that might come in the future and plan together, the result is a strategic community agenda. Having a response to the future already thought through community wide is one way to understand and manage change.
6	Consistent, tangible progress toward goals	A community with capacity turns plans into results. Whether it is using benchmarks to gauge progress or setting milestones to mark accomplishments, the momentum and bias for action come through as a community gets things done.
7	More effective community organizations and institutions	All types of civic clubs and traditional institutions – such as churches, schools and newspapers – are the mainstay of community capacity building. If clubs and institutions are run well and efficiently, the community will be stronger.
8	Better resource utilization by the community	Ideally, the community should select and use resources in the same way a smart consumer will make a purchase. Communities that balance local self-reliance with the use of outside resources can face the future with confidence.

These outcomes highlight the CCB processes and provide an indication of some of the things that could be done when working with a community. The focus is on:

- Building the skills and confidence of individuals and groups
- Enhancing community decision making and problem solving processes
- Creating a common vision for the future
- Implementing practical strategies for creating change
- Promoting inclusion and social justice.

3. Methodology

A case study is adopted as the preferred research strategy for this study as the approach emphasizes detailed contextual analysis of a limited number of events and their relationships, leading to the observation of new insights. As Yin (1984) posited, the approach excels at bringing understanding of complex issues such as CCB and can add to what is already known through previous research. Data were collected by the authors from observations and in-depth semi-structured interviews with project leaders, supporters and volunteers during site visits. In addition to gathering data on site operations, the observation method provided the authors with a way to check for non-verbal expressions of feelings, look up definitions of terms that respondents used in interviews and gave the authors the opportunity to observe situations respondents described first-hand. This is especially relevant to establish awareness of distortions or inaccuracies in description provided by the respondents who might have different understanding levels of the research concepts.

Investigations on CCB activities are guided by BCHCS' activities related to community learning, expanding community assets and community collaborations. The investigations on outcomes focused on four out of the eight CCB outcomes listed by Aspen Institute (1996). These four outcomes were purposefully selected based on their relevance to the CCB's rather localized project scale and less formalized organizational context. The four CCB outcomes investigated in this study consist of:

- Outcome 1: Expanding, diverse, inclusive citizen participation
- Outcome 2: Expanding leadership base
- Outcome 3: Strengthening individual skills
- Outcome 4: Widely shared understanding and vision

The indicators and measures of these four CCB outcomes are appropriately adapted for the case scenarios. The interview questionings were guided by these outcomes with their adapted indicators and measures. However, the following two additional open-ended questions were added: 1) What do you think are the enablers of capacity building in your community? 2) Why are you committed to the success of the building capacity in your community?

This research study applies the processes and tools of the grounded theory to analyze the data collected from the semi-structured interviews and observations and to generate common CCB enablers and drivers in the two case studies.

4. Case Discussion and CCB Outcome Findings

Two community projects are discussed: (1) Eco-life Initiatives at SJKC Woon Hwa and (2) Laksi Rooftop Garden and Learning Center.

4.1 Community Project One: Eco-life Initiatives at SJKC Woon Hwa

This community project is at a national Chinese primary school setting in the state of Johor, Malaysia. At the time of the study, the school had over 800 students and 45 teachers. The project was run by project leaders, students, supporters, all of whom are volunteers.

CCB Idea Inception

When the Principal was transferred to SJKC Woon Hwa, in 2015, she noted that her students were passive, reserved and lacked enthusiasm with out-of-classroom activities. She decided to champion a green initiative with a vegetable and fruit farm in the school compound. She got teachers and students involved in the project. She believed that the initiative would not only get the students to learn about green living environment, plant and nature, it would also improve the communication and interactions amongst students and with the teachers. Vegetables and fruits harvested from the farm were first offered to the school canteen operators to encourage farm-total menu using locally source ingredients. The balance was sold to parents and residents in the neighborhood (in this day and age, food comes in boxes and shrink-wrap). Many people have lost their connection with food. The initiative was intended to encourage the community to have an improved awareness of food sources leading to a greater appreciation for food. The school managed to rake in over RM20,000 (US\$4,800) in profits within a year.

Progress

With the initial success, the farming project scope was expanded in 2016. The farm began producing microorganism mud-balls as well as fertilizers from food waste, eliminating the need for pesticides and chemical fertilizers. The idea of 'going green' has become the mainstream of the project and eco-friendly fertilizer plays a big part in the transition from initial conventional agriculture to sustainable farming in the school. While the farming project gathered momentum in the school, the school has also picked up speed in their performance with the Eco-life Challenge initiated by the regional development authority. The challenge began in 2014 with the purpose of educating and encouraging the community in the state to lead a low carbon lifestyle by saving water and electricity as well as managing waste wisely. The program attracted over 400 schools and 40,000 students from the state.

A key objective was to foster low carbon society awareness among primary students, teachers and their families through school education in the state. Another key objective was to disseminate knowledge, awareness and practice of low carbon society among community in the state through primary students and teachers. Teachers were selected from each school to be trained on low carbon society and eco-household accounting activities on the use of electricity and water in the school. With the knowledge, the teachers in turn educated their students and engaged them in the measuring of carbon reduction effort made in the school. The performance was formally evaluated by official committee. SJKC Woon Hwa was selected as one of the 15 best schools for the challenge. As a reward, a group of students and teachers from the school were invited on an education trip to Kyoto, Japan where the idea of the Ecolife Challenge was conceived. The intention was to inspire the teachers and students with the opportunity to present what they have learned about low carbon initiatives in the region and what they could contribute to the development of a low carbon society. Since their return from the trip, the teachers and students have been invited by various other schools in the state to disseminate knowledge and sharing of good practices. The recognition has motivated the teachers and students to continue with their active involvement in championing low carbon society.

In October, 2017, SJKC Woon Hwa expanded the boundary of influences from school communities to educate members of the general public on environmental issues. An eco-centre was established in the school in collaboration with the regional development authority and a construction and engineering private entity. The private entity is building green homes and environmental sustainability is a key value of the organization. The collaboration is a corporate social responsibility initiative. The center was set up to provide information to visitors and raise awareness of the need to develop environmentally-friendly habits. The center housed exhibitions covering various topics on the impact of household waste, water pollution effects

and the importance of conservation and recycling. There was also a station for visitors to pledge for a change of habits. The aim was to instill a sense of personal responsibility for environmental degradation and provide ideas on how to make a difference for environmental sustainability. The center has received constant positive media coverage and encouraging responses from both domestic and foreign visitors since its opening.

Fieldwork

Site visits were made in the period November 2017- November 2018 with representatives from the regional development authority. In depth semi-structured interviews were conducted with various respondents. Sit-down interview sessions were held with the Principal, the General Manager of the private collaborator for the eco-center and the 2 project leaders. Interviews were also conducted with the project leaders, 20 students and 4 volunteers during the tour of the school, the eco-center and farms. In addition to the investigation on the 4 CCB outcomes, the discussions also explored the passion and support for the various green initiatives from the various groups of respondents. Students were the tour guides of the eco-center. They provided informative introduction and demonstrations for each exhibition. Various recycling ideas were observed around the school compound. Planter pots and hanging plants in recycled materials added colors and creativity along the corridors of the buildings. Parents volunteered and demonstrated the production process of eco-friendly fertilizers with enthusiasm. The vegetable and fruit farm were sectionalized into small plots. Project leaders explained how all students in the school had responsibility for taking care of plants as well as the vegetable and fruit farm in the school. Students were observed watering and fertilizing during the class breaks and after school. Project leaders informed that although students were assigned specific green duties in the school, every student helped out one another in ensuring the farm and plants were well care for and the eco-center's message of environmental sustainability was communicated clearly to all. Teachers and parents were seen mentoring the students. Students were observed sharing knowledge with each other. All respondents were proud of the school's accomplishments with the green initiative started by the Principal. They also spoke proudly of each other's contributions to the success.

- Outcome 1: Expanding, Diverse, Inclusive Citizen Participation

From the perspective of the private collaborator of the eco-center, it is not easy being green as responding to environmental problems has always been a no-win proposition for businesses. The renewed interest in environmental management bringing increased profitability for business has widespread appeal. However, whether the new vision of ultimate reconciliation of environmental and economic concerns makes business sense, it is a topic intensely debated by industry experts (Camilleri, 2015; Marshall, 2018; Evans, 2013; Walker, 2014). The General Manager was aware of the skepticism about the value of a corporate environmental commitment and acknowledged that economic forces at work in the industry were making it difficult to integrate environmental excellence into a business strategy. However, in his words:

“Reconciliation is not a choice. A strong global economy is sustainable only if it integrates economic, social, and environmental well-being. Our organization chooses to address this challenge with a far-sighted program and innovative, creative solutions. We believe schools play a vital role in preparing students from young to meet the sustainability challenges of the future. These students are the future business leaders who will play an integral role in making our planet more sustainable and healthy.”

The green initiative championed by the principal in the school began with a limited focus but developed into a green cultural movement over three years. It was met with excitement from not only the students and teachers; janitors, security guards and parents became volunteers. The initiative has brought a sense of belonging to the community and members

have grown closer with a common purpose. The students were excited with the selling of the farm produce to their families and involving their family members in the green initiative programs. Parents, who were industry experts and specialists, volunteered advices and provided training on organic farming practices to the teachers, students and other volunteers. The good practices have radiated to the school neighborhood and local vendors of farm supplies who are now sharing expertise on organic composting. Today, every teacher and student in the school is involved with the 'green movement'.

- ***Outcome 2: Expanding Leadership Base***

This case clearly illustrates how environmental education helps build creative thinking and relationship skills and fosters leadership qualities. The teachers, students and volunteers have learned about the resources the school consumed through participation in the Eco-life Challenge. They were involved in ideas generation to make consumption more sustainable. They were educated on the environmental toxic issues with the establishment of the eco-center. They were involved in championing recycling and minimizing environmental pollution. They learned about farming and food systems. They took personal initiatives to grow their own food. It is obvious that strong personal leadership and team leadership have developed in the learning and involvement process. The school has become 'environmentally focused resources' for future generations. The green initiative has encouraged students to live a "greener" lifestyle, at home and at school. This has sowed the seeds for a change of attitudes. Teaching students at a young age to be environmentally aware builds lifelong habits that could potentially make a dramatic difference in the future of the earth when they become industry leaders.

- ***Outcome 3: Strengthening Individual Skills***

The study reveals that the school has generated personal growth and skills development among community members through their active involvement in environmental education and green initiatives. This findings support previous studies on the benefits of environmental education (Archie, 2003; The NEEF, 2000; The NAAEE & NEEF, 2001; The NEEP, 2002). Environmental education is often lauded by educators as an ideal way to integrate academic disciplines, stimulate the academic and social growth of young people, and promote conservation of the natural environment (NEEF, 2000). Research shows that schools that adopt an environmental focus demonstrate better academic performance across the curriculum. Environmental education offers an enriching way for both students and teachers to connect their appreciation of the natural world to academics. Environment-based education also emphasizes specific critical thinking skills central to good science—questioning, investigating, forming hypotheses, interpreting data, analyzing, developing conclusions and solving problems (Archie, 2003; The NEEF, 2000).

Students who study environmental education develop and practice various leadership skills including working in a team, listening and accepting diverse opinions, solving real-world problems, taking long-term view, promoting actions that serve the larger good, connecting with the community and making a difference in the world. Sometimes traditional instruction is the most practical approach to covering broad content. However, using outdoor settings can infuse a sense of richness and relevance into a traditional school curriculum. When students learn through a problem-based approach – a key strategy in environment-based education – they gain a better understanding of what they learn, retain it longer, and take charge of their own learning – all key skills for success in a rapidly changing world. (The NEEF, 2000; The NAAEE & NEEF, 2001; The NEEP, 2002).

- Outcome 4: Widely Shared Understanding and Vision

During her interview, the Principal made the following statement:

“I was frustrated by what I saw around me when I first joined the school; lights left on, windows open with the air-conditioning on, recycling boxes not being emptied and litter everywhere. There was just a lack of awareness among the students and some teachers about environmental issues. The topic was covered in class, but they did not really see the practical applications of how you involve it in everyday life.”

The Principal created a new role for herself as sustainability coordinator at the school. The environmental education began with encouraging teachers and students to think of the school as a sustainability laboratory and create solutions to sustainability issues they identify in the school. “I knew it could not just be me; it had to revolve around the students and teachers as partners,” she said. “I supported them but they came up with ideas of what they wanted to do around the school, presented their proposals to the management and subsequently led the projects. It worked really well and they got a lot out of it.” The purpose was to actively engage all in creating shared understanding and shared vision of way forward in contributing to environmental sustainability. The environmental education process has resulted in wide commitment to eco life amongst the school community and its neighborhood. From green initiative to carbon reduction, the Principal was the architecture of the new culture in the school.

4.2 Community Project Two: Laksi Rooftop Garden and Learning Center

This community project is at a workplace setting in Bangkok, Thailand. The project is run by public cleaning staff of a district office and neighborhood residents. The project team had 26 active members at the time of research.

CCB Idea Inception

The idea was conceived in 2002 by a few public cleaning staff at the Public Cleaning and Public Park Section of the Laksi District Office in Bangkok. They were farming organic vegetables for their own consumption on unused land behind the office premises. As the crops were blooming, the staff was informed that they had to vacate the land for the landowner. The staff members were compelled to look for economical and sustainable alternatives to relocate their crops. The rooftop of the Laksi District Office building was available. The staff members organized and transformed the once storage space for unused equipment to a green rooftop garden.

Progress

The rooftop area was approximately 440 m². Only few common varieties of vegetables were transplanted to the rooftop in 2002. At the time of study in November, 2017, more than 130 varieties of seasonable vegetable crops and fruits occupied the entire rooftop. The area was systematically organized into different zones of cultivation seasons and plant root systems. The garden was managed by a project team leader who was also working at the Public Cleaning and Public Park Section. All team members were volunteers, making up of public cleaners and residents in the neighborhood communities. Since 2009, the project team frequently ran sharing sessions on best practices with setting up urban organic garden on concrete floor and limited space. There were also weekly free workshops to introduce innovative organic farming techniques to students, local communities and the public at large, including participants from abroad. With the success and increasing traffic of visitors to the rooftop garden, the project team was offered another open space of approximately 336 m² on the ground floor of the building, to expand their organic farming activities. Paddy rice plots, fish ponds, chicken coop and compost production were added to the list since.

Team members have continued to enjoy the harvest from the farms for own consumption. Excess produces from the farms were sold to staff in the building and neighborhood communities, generating income for the maintenance of the project. The project operates without funding from the district office. The project team has fostered community participation and support initiatives that promote self-sustenance. The other funding sources include sale of seedlings, eco-fertilizers and eco-deco items designed by the team members. In February, 2015, the Deputy Governor of Bangkok officiated the garden as a major learning center in the region for urban farming innovations and organic vegetable production. The center brought knowledge from the rooftop to actual farming sites with the establishment of 9 demonstration plots in the outskirts of Bangkok. Several pieces of unused land totaling over 6800 m² from public and private sectors, were turned into green land with edible vegetables and fruits. The plots showcase the practice of multiple cropping, a form of ecological intensification that is potentially highly sustainable when two or more crops are grown at the same time or in a sequence. The innovation has attracted thousands of visitors and organizations visiting the learning center and the demonstration plots every year.

Fieldwork

Site visits and interviews were conducted in November, 2017, with representatives from the Public Cleaning and Public Park Section, the project team leader, project members, and residents in the neighborhood communities, who volunteered for the project. The respondents had requested to be interviewed as a team. The authors also collected data during the tour of the center and the farms with the project members. The discussions centered on the history and guiding principle of the Sufficiency Economy Philosophy (SEP) for organic production at the learning center and demonstration plots. All the respondents were really proud when they spoke of their home-grown SEP approach to sustainable development and how the project was closely aligned with the recommended practices.

SEP was introduced in 1974 by His Majesty the late King Bhumibol Adulyadej. It is a development approach based on Buddhism in creating sustainable development through the integration of physical, social and spiritual dimensions. The concept of SEP aligns with the goals of the 2030 Agenda for Sustainable Development adopted by United Nations Member States in 2015. Some of the more prominent applications of the SEP in sustainable development endeavor include poverty eradication, food security, sustainable economic growth, sustainable industrialization and sustainable consumption and production. As an approach and mindset framework, SEP could support and complement the successful implementation and realization of the Agenda. In recent years, Thailand has begun sharing with the international community the application of SEP.

- Outcome 1: Expanding Diverse Inclusive Citizen Participation

SEP is a practice supporting the financial and productive autonomy of a community, while developing an environmentally sustainable economy and including all members of the community in the production and management process. In this respect, the Buddhist principle of compassion and respect for people and the environment provides an ethical foundation. Emphasis is placed on the collective management of the production process and on an ethic of sharing and compassion. Participation is rooted in the collective management as it was with the project team at Laksi Rooftop Garden and Learning Center. The model for participation comes from the way a Buddhist temple is run, where individuals periodically engage in collective endeavors in order to live and demonstrate the principles of SEP. At Laksi Rooftop Garden and Learning Center, adherence to the principles of SEP has proven to be a strong instrument of inclusion based on principles of community participation and the participatory transfer of knowledge.

The project team leader and members chose to engage in a horizontal relationship rather than a hierarchical one. The project membership was fluid and based on volunteerism, which is a Buddhist cultural practice. The membership strength expanded as the community evolved and the project grew.

- ***Outcome 2: Expanding Leadership Base***

All project team members, including the leader, were volunteers. They were either employees of the Laksi's District Office or residents in the neighborhood communities. Although there was no formal recruitment process for leaders and members, the respondents said that they had not experienced problems getting volunteers for the project: "We just put up a note on the notice board for help". There was one project leader for the learning center. However, there were also sub-leaders for various farming activities and community engagement initiatives in the project structure. For instance, there were sub-leaders for setting up a stall outside the building compound to sell farm produces to the neighborhood. These sub-leaders were often the idea originators.

Everyone was encouraged to contribute and lead to achieve the common development goals for the community, embedded within the principle of SEP. There was no formal training program for leaders. There were instead, abundant developmental activities within the community, including coaching, mentoring and task rotations, and members were encouraged to engage in leadership self-development. Every initiative success was celebrated as a community achievement. There were scrapbooks of celebration photos and shelves of mementos to show guests and visitors.

- ***Outcome 3: Strengthening Individual Skills***

SEP espouses moderation, reasonableness and prudence and the development framework is based on knowledge and virtue. The philosophy also attaches great importance to human development at all levels and emphasizes the need to strengthen community's capacity to ensure a balanced way of life and resilience, with full respect for the environment. Project members were passionate self-directed learners who constantly explored new approaches to organic farming and innovative techniques through knowledge sharing and exchanges with farming experts, an attitude facilitated by the world-wide-web technology. Knowledge acquired and created from the successful implementations of new farming approaches and techniques were shared within and beyond the community during knowledge sharing sessions and workshops. This, in turn, helped members to gain exposure, obtain constructive feedback, and generate new ideas.

Sharing knowledge also helped team members to build both individual and organizational reputation and stay motivated. As a resident volunteer said, "Having an opportunity to feel that my knowledge makes a difference, allows me to see how my work fits in the bigger mission of the organization, and the wider community". Another respondent who was a cleaner added, "Work without purpose is no work at all." A new team member noted, "I can be updated with the latest information and acquire new sets of skills from the expert sharing". There was also a buddy program, where a senior team member would be assigned by the project team leader to a new team member to provide guidance and assist the new member to foster constructive relationship with other team members to contribute to the community's shared goals.

- ***Outcome 4: Widely Shared Understanding and Vision***

The horizontal relationships amongst all team members and leader were held together by the guiding principles of SEP, and the common vision to contribute to the 20-year development plan for Bangkok Metropolis (2013-2032). One of the main outcomes of the development plan is to turn Bangkok into a city of knowledge, a green city and a city of opportunity for everyone. Posters of SEP principles, United Nation's Sustainable development Goals (SDG) and the city

development plan were found in many places at the Laksi Rooftop Garden and Learning Center, and demonstration plot sites. Respondents had good knowledge of the poster contents. As one interviewee mentioned, “The first lesson for all new team member is to understand SEP, SDG and what roles we play in the bigger development plan for our city”. The objectives outlined in Table 1 show close alignment and consistency in all the three broad focus areas of the community project.

Table 3: Objectives of Laksi Rooftop Garden and Learning Center (Public Cleaning and Public Section, Laksi District Office)

Objectives of Rooftop Garden
<ol style="list-style-type: none"> 1. To promote SEP to lead people to a balanced way of life and be a source of sustainable development by creating a self-supporting economy. People can produce their own food. 2. To establish a learning center and turn it into a main source of several organic agricultural techniques for people living in big cities 3. To help unemployed persons create alternative income opportunities 4. To encourage people to produce organic food for their own consumption 5. To reduce household waste by reusing and recycling organic and inorganic waste.
Objectives Learning Center
<ol style="list-style-type: none"> 1. To visibly expand sufficiency economy 2. To be a center of knowledge of organic vegetable production 3. To be a center for community to meet and exchange their knowledge 4. To be a source of organic food production 5. To be an attractive ecotourism park 6. To increase green areas based on the strategy of the Governor of Bangkok
Objectives for the Demonstration Plots
<ol style="list-style-type: none"> 1. To visibly expand sufficiency economy 2. To increase green areas and reduce the impact of global warming 3. To promote and expand learning centers of organic vegetable production 4. To increase sources of organic food production 5. To increase the value of unused land to normal garden for agro-tourism 6. To strengthen collaboration between the public sector and the community

5. Findings on CCB Enablers and Drivers

Both case scenarios have demonstrated the existence of various productive CCB activities in community learning and community collaboration. The development of community capacity is also evident especially with the intangible assets of social capital, social cohesion, skills, leadership and shared values. The four outcomes articulated by The Aspen Institute have been attained in both cases. The remaining discussion focuses on enablers and motivations for CCBs in the two community cases. Purpose-driven leadership was clearly an enabler for the CCBs as demonstrated by the Principal in the school and the project leaders in both cases. Personal leadership and team leadership played necessary but distinct roles, in fostering commitment to the community's goals, promoting participation in community activities and in developing relationships amongst community members through the leaders' democratic and interpersonal skills.

The case findings also bring to light the fact that behind the successful leadership of CCBs is a vibrant culture that engages and energizes the community members. The eco life culture in the school has been defined, shaped and personified by the Principal. In the case of Laksi, Buddhism cultural beliefs make the connections for the community members. The other key enabler for CCB in both communities is social cohesion. There were obvious harmonious and productive social relations where the community members, irrespective of their personal differences in social and economic status, were sharing common community values and goals, having a sense of mutual commitment and belonging to the community. There was also a sense of solidarity, responsibility and mutual recognition with individual democracy.

In both cases, volunteers played a significant role in the community capacity development. They complemented essential services where they were lacking or insufficient and built skills across different areas through transfer of knowledge and experience. They also helped to mobilize the community to develop a sense of ownership and awareness about the challenges the community was facing. Parent volunteers in the school led activities to leverage collective action and attitude changes in areas such as sustainable consumption, environmental sustainability and community autonomy.

The spirit of volunteerism was strongly felt in the case of Laksi Rooftop Garden and Learning Center as it was also a place of Buddhism practice. However, while volunteers donated their work to benefit others and society, it is also clear from the findings that enabling volunteerism requires an investment for people to channel their contributions into meaningful engagement opportunities aligned with wider development efforts. This is precisely where purpose-driven leadership in the community brings them all together. When respondents were asked what drove them to volunteer and commit to community development, two major reasons surfaced: a sense of belonging and a higher purpose. All respondents indicated a strong connection with their communities. A sense of belonging to a greater community that shares common interests and aspirations has been recognized as an important determinant of psychological and physical well-being by many researchers. McMillan (1996) defines the sense of community as a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together. Belonging, as evidenced from the responses received from the study, is primal, fundamental to a sense of happiness and well-being.

Part of happiness is having a higher purpose; something to strive for that is bigger than the individual. Most people want to matter and to make a difference in the world, at work, or in someone else's life. A higher purpose is how these people find deep meaning and fulfillment in their lives by contributing to someone or something that is bigger than them. The respondents shared the following two quotes that summed up their perspectives: "Many persons have a wrong idea of what constitutes true happiness. It is not attained through self-gratification but through fidelity to a worthy purpose" (Helen Keller, an American author and educator, 1880-1968). "Focusing your life solely on making a buck shows a certain poverty of ambition. It asks too little of yourself. Because it's only when you hitch your wagon to something larger than yourself that you realize your true potential" (Barack Obama, the 44th president of the United States from 2009-2017). The findings also reveal that a key requirement for capacity building is to recognize that the social whole is more than the sum of its individual components. People form social systems which provide for a range of needs not met through market transactions. Households, communities of interest, locality and neighborhoods create networks of mutual obligation, care, concern and interest. These networks, norms, and trust, which facilitate co-operation for mutual benefits, are the 'social capital' of the community.

The quality of the social processes and relationships within which learning interactions take place is especially influential on the quality of the learning outcomes in the community. The quantity and quality of a community's social capital has a large impact on that community's capacity to sustain a social learning environment and manage change amidst concerns about the social and economic viability of rural, remote and 'peripheral' communities in the national and global political economy today. Figure 1 summarizes the study's findings on enablers, drivers and the need for purposeful leadership in CCB projects.

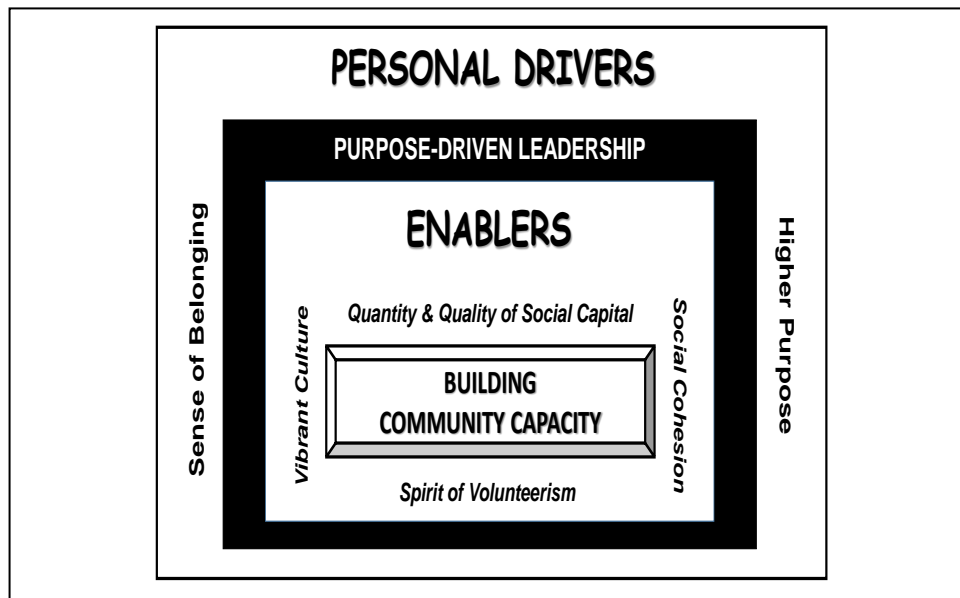


Figure 1: A Model of Enablers and Drivers for Community Capacity Building

6. Managerial Implications and Conclusion

This study highlighted the alignment of the concept of community capacity building with shared value creation for community development. It began with a phase of community research into the strengths, challenges and needs of target communities with the aim to understand the breadth and scope of capacity needs in these communities. CCB strategies were then implemented to build specific capacities to address the challenges and needs within the communities. In both case studies, CCB strategies yielded impressive results, bringing enormous benefits to the communities. Both in Malaysia and Thailand, these cases demonstrate the important and positive role CCBs can have in creating and sustaining an environment in which opportunities can be created, whilst simultaneously recognizing that community needs must be addressed for communities to be strong and resilient. Indeed, what is evident from these two cases is the importance of recognizing the strong interconnections between opportunity creation and wider community capacity building activities.

The findings show that most of the beneficial changes in communities come about through the process of engagement, whereby communities are able to respond to opportunities, or deal with problems, by bringing them to the attention of those with the ability to respond and carrying out agreed plans of action. However, such engagement cannot take place unless the community has the capacity and the recognition required to engage in such discussions. Policy makers should thus understand that most decisions and support should be exercised within communities as much as is practically possible. On the other hand, the challenges faced by local government in implementing CCB strategies should be understood, as Dhakal (2010) found with climate mitigation strategies implementation, especially in developing countries.

Portney (2003) reasons the idea of sustainable communities grew out of the understanding that individual human behavior and the local governance context in which it takes place is of vital importance. Social capital and community capacity is less likely to be created or sustained from the outside. Ultimately, it is the community and its residents that have the strongest understanding, ability and motivation to shape it for the better. The study reveals that an effective CCB is a positive example of social innovation in practice. Social innovation will play a critical role in the short, medium and long-term as communities, cities, regions and states seek to build and rebuild in crisis and address complex issues. The findings also demonstrated the multiplier effect that takes all sorts of actors and assets to develop or to build capacity in a community. The capacity of a community to develop is dependent on the private, public and voluntary sectors as well as on households and individuals who are resident there. Measures to promote private sector and social entrepreneurship are perhaps a prerequisite for successful and sustainable regeneration.

There are many strategies that will help to turn a deprived area around, but the most effective will be the ones that bring the best of the private, public and third sectors together and that recognize that most people will play some role in all three. Eliot (2013) argues that sustainable development refers plainly to maintaining development overtime. Communities, like people, are never really finished developing. New capacities are constantly required and emerging as communities respond to new issues over time. Thus, community capacity building is best thought of as an ongoing process of learning and development that is required for effective action.

However, it is also important to realize that a CCB is not a 'quick-fix' to the problems of local communities. Rather, it is an essential part of a sustained approach to local development. As Chaskins (2001) states, a CCB is designed as short-term interventions that have long-term effects. Engaging in CCB initiatives need to focus on initiatives that create short-term outcomes but that enable and grow the long-term capacities of communities. In conclusion, the authors posits that CCB initiatives should be more than 'projects'; they are long-term commitments. It is intended that the findings in this paper will contribute to knowledge base as inputs for CCB strategic decision making in other settings.

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Influential Factors on Willingness to Pay for a Battery Electric Vehicle in Bangkok, Thailand

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Abstract

Electric vehicles (EVs) or battery electric vehicles (BEVs) are expected to be the future of the automotive industry. Since they offer benefits in terms of energy consumption, maintenance costs, and pollution emission, EVs have been promoted as an alternative choice to create a sustainable way of using vehicles and energy. An electric vehicle is defined as a vehicle that fully uses electricity as the power source. Thailand is at the beginning phase of EVs since only a few brands have introduced fully electric vehicles in Thailand. An assessment of the willingness to pay for this type of vehicle has not been conducted in Thailand yet. The objective of this research is to identify the influential factors that affect the willingness to pay for an electric vehicle. A questionnaire survey was developed and distributed randomly to 400 people in Bangkok and the metropolitan area. Multiple regression is employed to identify the variables affecting the amount of money people are willing to pay for an electric vehicle. Significant factors are average family income, number of cars in the family, age, etc. The findings indicate that on average people are willing to pay about 910,000 Baht for an EV car. Recommendations for policymakers and auto manufacturers are also discussed.

Keywords: Willingness to pay, Electric vehicle, Multiple regression, Alternative energy

1. Introduction

In recent years, electric vehicles (EVs) have become a hot issue in the automotive industry in many parts of the world. EVs are cars that are powered by an electric motor, using a battery as the power source. They are designated as battery electric vehicles (BEVs) (Brennan & Barder, 2016). In Asia, China is known as a fast-growing market for EVs (Yang, Zhang, Fu, Fan, & Ji, 2018). Many policies have been implemented to support the growth of EV markets, including tariffs and tax reduction (Lai, Liu, Sun, Zhang, & Xu, 2015; Steen, Schelven, Kotter, Twist, & MPA, 2015; Yang et al., 2018). Cost significantly influences the buying decision of a vehicle. Our research evaluates the influential factors on willingness to pay (WTP) for a BEVs in Thailand. The measurement of WTP can be a supportive guideline for automotive firms and the Thai government to set up an acceptable total price for BEVs that can truly support the development of an EV market in Thailand. EVs dramatically generate change in the automobile industry through technologies and innovations (Brennan & Barder, 2016). Since 2000, the demand for vehicles has been increasing annually (Jeerapaet, 2012). Therefore, the demand for fossil fuel has also been increasing since it is a major and reliable energy source for vehicles. In consequence, the automobile became one of the major factors impacting global warming (JAMA, 2014). This has led people to seek cleaner energy supplies that do not pollute the environment and possess sustainability.

Electric cars can be a benefit for the local environment in terms of emissions and noise pollution (Klöckner & Mehmetoglu, 2013). Moreover, BEVs can be used for future sustainable mobility (Pelegov & Pontes, 2018) as long as electric power is renewable energy. Nowadays, BEVs have become more popular in many major countries in the world as they promote the use of alternative energy. BEVs have a direct advantage in maintenance and running cost. BEVs are also instrumental in reducing the fossil fuel consumption that has caused major problems in the world (Brennan & Barder, 2016). EVs become more popular as the technology grows and is accepted by people as the norm. With EV technology improving, such as for instance, the increase in energy storage and a lower production cost, automakers have introduced newer generations of electric automobiles. According to James Ayre (2016), the EV market is increasing year by year. The growth rate in the European region, US, and Japan are 27%, 19%, 36%, respectively.

However, consumer acceptance of EV is still a crucial factor that contributes to the success of an EV (Ozaki & Sevastyanova, 2011). Consumers' willingness to pay for an electric vehicle is still in doubt and needs to be considered, especially within Thailand. According to the research of Diamond (2009), the primary barriers for adopting a new technology are the lack of knowledge, high initial costs, and low-risk tolerance. Though the cost of the technology is still high, the interest in EVs has increased in recent years. Its market share, however, remains small. As the price of gasoline increased, people tended to move toward EVs. People are thinking about both the pros and the cons of EVs, and changing their willingness to pay for EV cars.

2. Literature Review

Influential factors in buying decision

Research indicates that demographic data, including age, gender, marital status, etc., significantly influence the WTP for any products and services (Samdin, 2008; Thanasuta & Metharom, 2015). Besides demographic data, the relevant literature focuses on the variables that affect the willingness to pay for an electric vehicle in Thailand. According to Bockarjovaab and Steg (2014), the most common barriers for the adoption of EVs are related to both monetary and non-monetary costs. Those costs are compared with the use of a conventional vehicle. Therefore, price plays an important role in a customer's perception and WTP for BEVs. Thirty percent of the buyer's concern when purchasing a new vehicle purchase is price related. However, the purchase price of an EV is dramatically higher than an internal combustion engine (ICE) vehicle in the same class, but EVs tend to have a lower running cost. Since EVs consume electricity, the cost of running a BEV is regarded as an advantage for this new type of vehicle.

Musti and Kockelman (2011) claim that the three most important attributes, which customers are concerned with when buying a new vehicle, are price, fuel economy, and reliability of the vehicle. Durability is a factor that is of concern (Jacobs, Laurenz, Keuchel, & Thiel, 2016). It is how the car can stay in good condition after a period of time. Since a BEV is a new type of vehicle, the customer may expect a similar rate of durability as that of an ICE car. The average usage time for a car is 8 years (Jacobs et al., 2016). To maintain an EV, changing the battery is costly when compared with conventional ICE maintenance. Infrastructure for supporting the use of a vehicle is also an important customer variable, especially in the EV market. The number of recharge locations within an area is directly related to the proportion of driving an EV (Caperello & Kurani, 2012). Therefore, charging infrastructure is a key contributor to the development of the EV market (Brown, Pyke, & Steenhof, 2010).

In their study, Krupa et al. (2014) found that 71.7 percent of the respondents have higher motivation to buy a plug-in hybrid electric vehicle (PHEV) when charging stations are frequently available on their travel routes. Nowadays, people are concerned about the environment (Cherian & Jacob, 2012). According to (Brennan & Barder, 2016), EVs can reduce the environmental impact when compared with ICE vehicles. The probability of buying an EV increases when the customer considers that the use of the EV can lead to a decrease in environmental impact (Bockarjovaab & Steg, 2014). Besides environmental issues, social-norms are an influential factor if an individual perceives that other members in their society are in favor of adoption (Cialdini & Trost, 1998). In contrast, the perception that very few people use EVs could have the opposite effect and decrease the likelihood of adoption. Low social desirability of EV use could serve as a potential barrier to the adoption of EVs (Smith et al., 2012). The knowledge and perspective of a customer are also an influence on the consumption and WTP of a product (Díaz, Pleite, Paz, & Garcia, 2012). A study by Zareie and Navimipour (2016) confirms that environmental knowledge has a direct relationship with customer behavior. Therefore, knowledge influences a customer's decision in many aspects.

Table 1 shows the influential factors that contribute to a buying decision for EVs. They can be classified into four main groups. The first is the vehicle itself: performance, durability, and range. Other related factors, such as entertainment functions and features, can also influence the buying decision of a vehicle. Price is one of the top priorities for any buying decision. It includes both the initial and the long-term spending for a vehicle (total ownership cost). External factors, in this case, are infrastructure, environmental issues, and social norms. The latter are individual factors that mostly depend on the individual customer who decided to buy a vehicle. All these criteria are thus employed in this study to develop a questionnaire for determining the influential factors for buying an EV.

Table 1: Influential Factors for Buying EVs (Cialdini and Trost, 1998; Bockarjovaab and Steg, 2014; Jacobs et al., 2016; Díaz et al., 2012; and Zareie and Navimipour, 2016)

Group	Component
Vehicle-related factors	Performance, durability, range
Price-related factors	Price, cost, consumption
External factors	Infrastructure, environmental issues, social norms
Individual factors	Knowledge-based, customer perspective

Willingness to Pay (WTP)

Willingness to pay (WTP) is an important factor that depends on whether a person is satisfied with a specific product or service at a certain pricing level. A person's WTP is determined by personal perspective toward the worthiness of the product that the person will purchase (Rödiger, Plaßmann, & Hamm, 2016). This technique originally was employed to measure environmental values in terms of monetary value. It was then applied in many fields, including tariffs, alternative policies, and cost-benefit analysis to support the decision-making process (Rödiger et al., 2016) and support pricing strategy development (Anselmsson, Bondesson, & Johansson, 2014). The identification of the WTP can support the price that was set up for optimizing the profit by increasing the sales volume and adapting to the right price (Anselmsson et al., 2014).

In this digital era, information about products is easily accessed by customers. Consumers then think and re-think about the worthiness of a thing (whether it will fulfill their requirements or not). A consumer calculates the price, compared with its usage and cost of maintenance. In the case of an EV car, consumers will compare the usage and the price of an EV car to a normal fuel car. They want to see how much they can save from making a different choice, both in the

short term and the long term. Consumers carefully consider every factor they know in order to support their decision. Small variations of prices and the consumers' behavior can have some effects on revenues and profits, which impact an individual's willingness to pay. To conclude, the pricing theory here is based on customers' willingness to pay from their own standpoint of buying an asset.

3. Methodology

Method of Approach and Data Collection

To collect the primary and secondary data for this research, two research methods are employed. The first method is documentary research from literature surveys, journals, articles, previous research works, and case studies. The data are collected from published data on an online database. Articles, journals, and previous research are employed to measure the factors that influence the willingness to pay for a BEV. Then, an empirical survey is employed as the second method. A questionnaire survey is given randomly people who have income within the Bangkok area. Surveys are conducted both on paper and online.

Instruments or Materials

The instruments used for this study are survey questionnaires. The questionnaire is divided into three main sections.

- Section 1: Demographic Data – In the first section, personal information is asked for, such as the type of a personal-owned car, use of the personal car (distance per day), and any behavior toward buying a car. Demographic information is asked for, such as gender, income, marital status, family size, education level, and family income.
- Section 2: Influential Factors in Buying Decision – In this section, we ask the person about his/her behavior and attributes associated with buying a car, for example, horsepower, luxury, consumption rates, etc. The next questions are about testing the knowledge of EV cars, to observe how much they know about EV cars.
- Section 3: WTP for BEVs – In the last section, we ask and measure the willingness to pay for an EV car, how much they are willing to pay, or even if they are willing to buy an EV car. Lastly, people are asked to suggest an exact price for an EV car.

Figure 1 shows the conceptual model of this study. The independent variables are categorized into two groups and referred to as demographic data and influential factors for any buying decision. The dependent variable is the WTP for an EV.

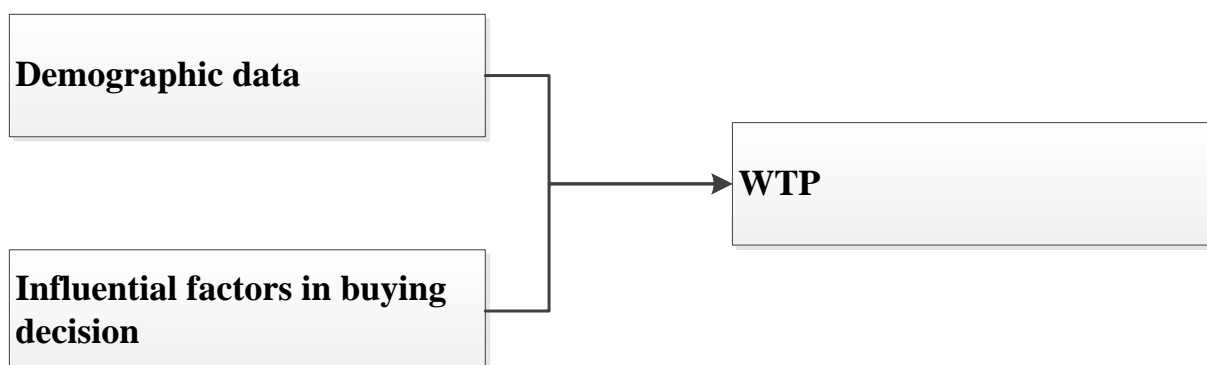


Figure 1: Proposed Conceptual Model of this Study

Population and Sample

To calculate the sample size for this research, the formula of Taro Yamane (1967) is employed with a confidence level of 95%. Yamane's calculation formula is as follows:

Formula 1:

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

Where:

n = sample size

N = size of the population

e = error of 5%

In this case, N is the population of people living in Bangkok; 9,617,000 people (UN, 2017). Therefore, the appropriate sample size of this research is equal to 400 respondents. The questionnaires were randomly distributed to people who live in the Bangkok area via both online surveys and paper forms. Distribution took place in many areas of Bangkok, including public places, department stores, and the Motor Show 2018 Exhibition. The respondents were randomly asked to fill in the survey. In addition, an online form was distributed via a social media platform. The respondents were asked to fill in an online form if they preferred to do so (through a QR code). Then the questionnaires were returned and verified, to achieve 400 validated questionnaires. Variables that are significantly important to the decision and willingness to pay demonstrate the reasons for how people decide on buying an EV car.

Testing and Evaluating the Model

The Cronbach's alpha method is used for the reliability test. It measure the reliability level of the collected data and is a common indicator for measuring the consistency and reliability of collected data. It is suitable for determining the reliability of multiple questions in a survey/questionnaire.

Formula 2:

$$\alpha = \frac{N \times \bar{c}}{\bar{v} + (N - 1) \times \bar{c}}$$

Where:

N = number of items

\bar{c} = average covariance between item-pairs

\bar{v} = average variance

In this project, we use Cronbach's alpha on the pilot test to test the reliability of the gathered data. The testing, which uses a coefficient from 0 to 1, produced results as expected. The acceptable level of Cronbach's alpha is at least 0.7 (Tavakol & Dennick, 2011).

Multiple Regression

Multiple regression is an extension of a simple linear regression. It is employed to predict the value of the dependent variable, outcome, target, or criterion variable based on the value of two or more other variables (Nathans, Oswald, & Nimon, 2012). In this project, multiple regression is used to see the actual price that people are willing to pay for their desired EV car.

We used questions to check the amount of money that people are repeatedly willing to spend. In this case, we calculate the actual price that those people who desire an EV car are willing to pay.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

Data validation

Observations must be independent of each other. It is convenient and suitable to use Durbin-Watson statistics to check variable independence. We use the SPSS program for multiple regression, enhanced by the Durbin-Watson results. The acceptable range of relatively normal statistical values is a value between 1.5 and 2.5. However, a study by Field (2009) shows that there is a definite cause for concern when the values are less than 1 or more than 3. Variance inflation factors (VIF) are employed to describe the multicollinearity in the regression analysis by estimating the inflated regression coefficients, compared with the predictor variables (Hast, Alimohammadisagvand, & Syri, 2015). If the value of the VIF = 1, the data have no correlation. If VIF is $1 < \text{VIF} < 5$, the data have moderate correlation. Lastly, if VIF is more than 5 to 10, the data have high correlation (Minitab Inc., 2017)

4. Result and Data Analysis

According to the findings of this study, two categories of independent variables are separated into 11 factors, as shown in Figure 2. Each of the factors has a different influence level on the WTP.

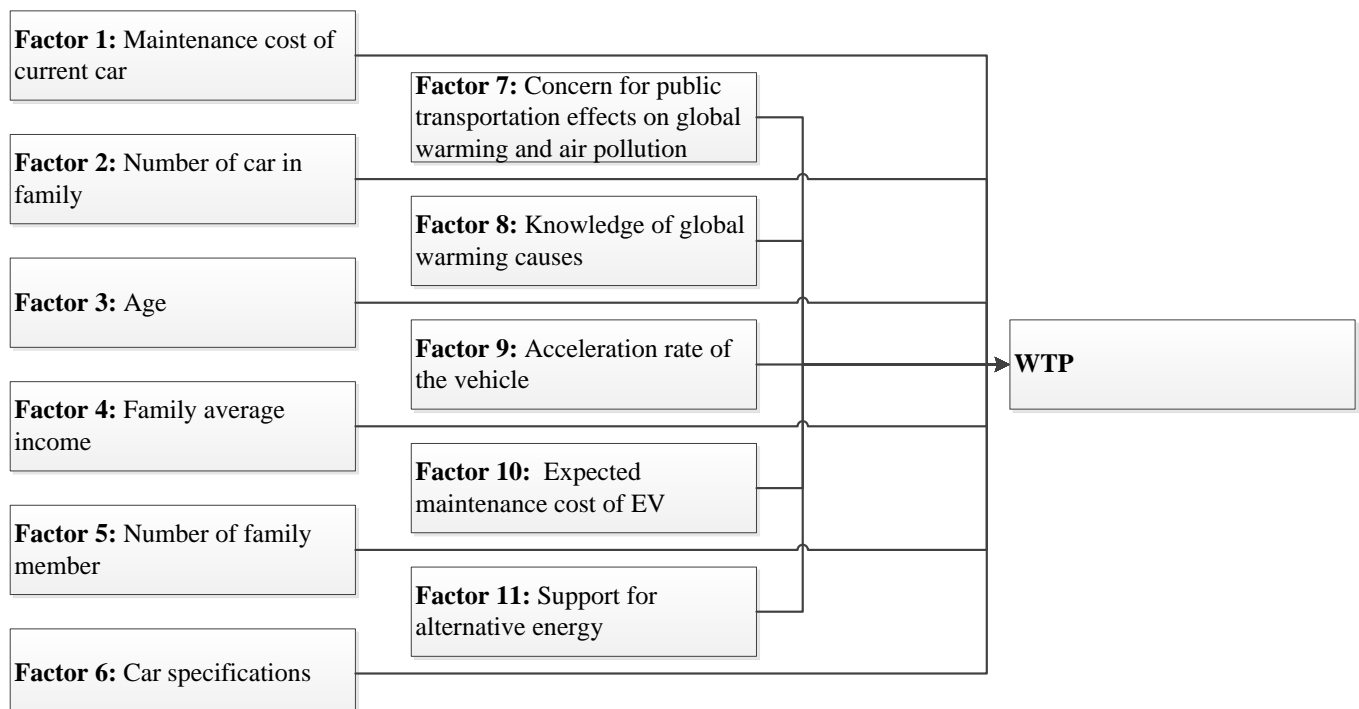


Figure 2: Framework of WTP for EV

Table 2: Description of Each Factor

Factor	Topic	Description
Factor 1	Maintenance cost of current car	The amount of money that a person spends on maintenance for his or her car in a year.
Factor 2	Number of cars in family	Number of cars in a family (living in the same household).
Factor 3	Age	Age of a respondent, measured in years.
Factor 4	Average family income	The average income of the entire family in the same household.
Factor 5	Number of family members	Number of people living in the same household.
Factor 6	Car specifications	Features and options of a car, excluding the performance and engine specification.
Factor 7	Concern for public transportation effects on global warming and air pollution	The respondents are asked to identify their levels of environmental concern for global warming and air pollution created by the public transport sector.
Factor 8	Knowledge of global warming causes	Questions that measure the knowledge of a respondent on global warming.
Factor 9	Acceleration rate of the vehicle	Acceleration is the rate of change of velocity of a vehicle with respect to time (maximum).
Factor 10	Expected maintenance cost of EV	How much money a person is expected to spend if they drive an EV.
Factor 11	Support for alternative energy	The perception of a person on the utilization of other alternative sources of energy (rather than fossil fuel).

Descriptive Results

According to the frequency table of demographic data as shown in Table 3, a total of 400 valid questionnaires were returned. The SPSS program was employed to analyze the data. Most of the respondents already have at least one car (81.8% of the respondents). Age ranges from less than 20 years old to 70 years old because this survey targeted people with the capability to buy a car. Most of the respondents have a bachelor's degree (56.87%) or higher than a bachelor's degree (29.71%). Moreover, the income level is quite high as 33.87% of the respondents have a salary of more than 50,000 Baht and 24.60% have a salary that ranges from 30,001 to 50,000 Baht. In addition, the family income of the respondents ranges from 50,001 to 100,000.

Table 3: Frequency table of demographic data

Variable	Category	Respondents(%)	Frequency
Car (Own)	Have	81.80%	256
	Do not have	18.20%	57
Gender	Male	61.30%	192
	Female	38.70%	121
Age	<=20	1.28%	4
	21-25	13.74%	43
	26-30	15.34%	48
	31-35	9.27%	29
	36-40	13.74%	43
	41-45	8.31%	26
	46-50	9.58%	30
	51-55	10.86%	34
	56-60	16.61%	52
	61-70	1.28%	4
Status	Single	48.56%	152
	Married	49.52%	155
	Etc.	1.92%	6
Education	Below Mathayom 6	2.24%	7
	Mathayom 6 or equivalent	6.07%	19
	Equivalent to Bachelor's Degree	5.11%	16
	Bachelor's Degree	56.87%	178
	Higher than Bachelor's Degree	29.71%	93
Salary	<15000	10.22%	32
	15001-20000	12.46%	39
	20001-25000	8.31%	26
	25001-30000	10.54%	33
	30001-50000	24.60%	77
	>50000	33.87%	106
Average family income	<50000	21.73%	68
	50001-100000	35.46%	111
	100001-150000	12.78%	40
	150001-200000	11.50%	36
	>200001	18.53%	58

Multiple Regression

The results of the multiple regression indicate that the buying decision of an EV is influenced by 11 factors, as shown in Table 4. Those 11 factors can be categorized into four groups, including the demographic group, cost related group, performance group, and environmental group. In the demographic group, age, family income, number of family members, and the number of cars in a family influence the buying decision of an EV. The higher the age and family income, the higher the probability of buying an EV. However, a small family tends to be interested in an EV more than a large family. A family with a higher number of cars has a higher probability of buying an EV. Cost is an important factor for buying an EV.

People do not want to spend a lot of money to maintain their car. Therefore, people that spend more money to maintain their current car have a higher probability of buying an EV. These people expect to spend less money on maintenance on the EV. Performance is another influential factor for making a buying decision on an EV. The acceleration, entertainment system, and safety functions strongly influence the customer, with a p-value of less than 0.05. The environmental group, including concern for public transportation effects on global warming and air pollution, strongly influences the customer decision to buy an EV, with a p-value of less than 0.05. Therefore, customers expect that the EV can contribute to a sustainable environment when compared with the ICE car.

Table 4: Results of Multiple Regression

Multiple Regression Analysis	Unstandardized Coefficients	Standardized Coefficients	t	VIF
Constant	-301,788		-0.729	
Factor 1: Maintenance cost of current car	8.219	0.15	2.725** *	1.058
Factor 2: Number of car in family	98,716.91	0.213	3.467** *	1.317
Factor 3: Age	10,240.62	0.168	3.008** *	1.087
Factor 4: Family average income	0.184	0.107	1.899*	1.113
Factor 5: Number of family member	-57,125.6	-0.11	-1.853*	1.232
Factor 6: Car specifications	114,691.4	0.157	1.973**	2.198
Factor 7: Concern for public transportation effects on global warming and air pollution	-131,278	-0.178	-2.239**	2.193
Factor 8: Knowledge of global warming causes	154,192.7	0.11	2.002**	1.055
Factor 9: Acceleration rate of the vehicle	-109,787	-0.147	-1.981**	1.921
Factor 10: Expected maintenance cost of EV	-82,645.5	-0.121	-1.947*	1.355
Factor 11: Support for alternative energy	192,918.4	0.255	3.119** *	2.336
Cronbach's Alpha = 0.906 DW = 1.956				
Adjusted R-squared = 0.164 F = 94.801***highly significant				
*p < 0.10 , **p < 0.05 , ***p < 0.01				

The negative standardized coefficients represent the negative impacts of the independent variables on the dependent variable. Factors 5, 7, 9, and 10 negatively influence the WTP of an EV. This implies that a small family has a higher chance of buying an EV. Moreover, people who are willing to buy an EV are not much concerned about the acceleration rate and the maintenance cost of an EV. Besides that, people who are concerned about the effects of public transportation on global warming and air pollution are less likely to pay for an EV. They may seek other ways of reducing the emissions from the transport sector.

They may, for instance, use the public transport that is available in Bangkok instead of using a private environmentally friendly car. In order to validate the results, VIF, Durbin-Watson, F-value, Adjusted R-Square, and Cronbach's alpha are used as indicators to measure the validity level of the results. The indicators have acceptable ranges as in the following.

- VIF: An acceptable value is below 5. The value of VIF that shows no correlation of the variable is 1. If the value is 1, this shows the independence among variables. According to our data, the VIF ranges from 1.055 to 2.336. This shows almost no dependency and correlation among variables.
- DW: Durbin-Watson (DW) values show the relativity of variables. DW values are from 0-4, and we obtained an excellent value that is near 2, 1.956. In this project, there is almost no autocorrelation among variables.
- F-value: The data has an F-value of 94.801 which is highly significant. This shows a highly linear relationship among the variables.
- Adjusted R-Square: We obtained an R-Square of 0.164. This number indicates that there are additional factors (not in the model) that can affect the willingness to pay for a person. Since a vehicle is an expensive durable good, purchasing a car is a big decision for any buyer. Many factors influence the buying decision process. However, some factors in this research are insignificant, so they are taken out of the model. The remaining significant factors can only explain about 16.4% of the variation in the dependent variable. In addition, some other factors are excluded in this study, for example, safety rating, charging time for a full charge, and a driving range of more than 100 kilometers per a fully charge. Even though they are important features for EVs (Frost and Sullivan, 2018), they depend on existing technology. A respondent may not be able to control the performance or effectiveness of these features. The other infrastructure of an EV, including chargers and charging stations, are primary needs of EV adoption, so this research emphasizes other influential factors for WTP (mentioned earlier).
- Cronbach's alpha: 0.906 is considered reliable and is in the range of an excellent value. The results show that people are interested in purchasing an EV car when it can meet their expectations and requirements. The seven influential factors in this paper contribute to the WTP for an EV. People expect to pay about 910,000 baht for an EV, on average. However, people expect at least the same benefits for an EV, compared with a conventional ICE vehicle. Therefore, a small and impractical EV car may not be accepted by customers.

5. Discussion

The multiple regression for the WTP for an EV indicates that it is influenced by various factors. Out of 11 significant factors, 7 of them carry positive standardized coefficients (Factors 1, 2, 3, 4, 6, 8 and 11). 4 factors are highly significant and affect the willingness to pay (significance values are less than 0.01). They are Factors 1, 2, 3 and 11.

The most influential factor is Factor 11: "Support for alternative energy" with a standardized coefficient of 0.255. This indicates that people with one additional level of concern on the utilization of other alternative sources of energy (rather than fossil fuel) are willing to pay 192,918.2 Baht more for an EV.

Factor 2: "Number of cars in a family" is also a strong factor affecting the WTP with a standardized coefficient of 0.213. One additional car owned in a family leads to an increase in the WTP by almost 100,000 Baht. This implies that an EV may not be attractive to a person or a family with no car, compared to a family with at least one car.

Factor 3 and Factor 1 have the same influence on the dependent variable with standardized coefficients of 0.168 and 0.150, respectively. Observe that Factor 6: "Car specifications" refer to features and options of a car, excluding the performance and engine specifications. This factor is significant (significance level from 0.01 to 0.05) and carries a positive standardized coefficient of 0.157. One additional feature or option on an EV increases its WTP by 114,691.4 Baht. Furthermore, two other positive influence factors are Factor 4: "Average family income" and Factor 8: "Knowledge of global warming"; they have the same level of influence on the dependent variable with standardized coefficients of 0.107 and 0.110, respectively. The higher the income, the higher the possibility of buying and supporting an EV.

According to the survey results, people expect to pay 910,000 Baht for an EV, on average. Also, people that are interested and willing to pay for an EV are those who have a positive mindset to save the environment and are concerned about global warming. Hence, people who are interested and willing to pay for an EV are people who highly support the utilization of alternative energy, live in a family who enjoys a high income and have multiple vehicles, currently pay maintenance expenses on their vehicles, and have good knowledge about major environmental concerns, such as global warming. The older generation is likely to pay more on an EV, and the good features of EVs can certainly increase their WTP.

6. Implications and Conclusion

People are willing to pay for an EV car, regardless of the high value of the car. People focus more on cost related factors including consumption, battery life, and maintenance cost. Therefore, manufacturers should focus more on the services that support the running cost of a vehicle. A battery guarantee and low maintenance cost can motivate people to buy EVs. However, the specifications of a car are also important. No one expects less when they pay more. Therefore, EVs should provide at least the same value when compared with a conventional ICE car in the market. This is because people tend to purchase cars that are at least as large and powerful as those they are used to drive (Leif Jacob, 2015). Another interesting result is that an EV tends to be the second car for a family because of the limitations in range and size of the vehicle.

Moreover, EVs are a new type of vehicle that most customers have never experienced. To promote the use of EVs, the manufacturer, government, and private sectors need to create a friendly ecosystem and influential factors for supporting the development of the EV market. The government should improve the infrastructure, such as charging stations in public areas. People who are willing to pay for EV cars are attracted by the lower tax and first car policy. If the government can have a policy for new EV cars, then people will likely buy an EV car. The environment is one of the reasons that people want to buy an EV car. If any organizations can give knowledge about the benefits of EV cars, people will start switching to EV cars. However, knowledge does not need to be in detail, but enough for people to know about EV cars. The Thai government may reduce taxes for people who use EV cars, and they can get revenue back when batteries are sold. In conclusion, the government, car manufacturers, and private sectors need to work together to come up with a policy that is suitable for people to increase the WTP for EV cars. By using the results that have been collected, both the government and car manufacturers can prepare for upcoming EV cars in the future.

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Community Social Capital Linked to Rural Tourism Opportunities: The Case of a Potato Community in Northern Thailand

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Abstract

This article presents the findings from a participatory action research conducted in a 'potato community' that wishes to develop community-based tourism (CBT). The research used a social capital model to understand the readiness of the community in developing tourist products and services. The findings were thus analyzed through the lens of the three components of social capital; bonding, bridging and linking networks. To collect data the researcher met with a wide variety of community members. The findings suggest that for the community to develop a CBT initiative it would be necessary for a tourism committee to be created that focuses on methods to include community diversity along with creating a potato co-op that would build stronger community trust especially monetarily and would focus on innovation of the main cash product of the potato community. The community currently lacks entrepreneurial activity among its residents. Suggestions are offered that link social capital components with the ability to innovate community products. There is a need for further training in entrepreneurial education as a method to further bond, bridge and link the community and grow a system of innovation.

Keywords: Social capital, community-based tourism, rural development, innovation

1. Introduction

Tourism is often proposed as a development strategy for rural regions based on the assumption that tourists generate employment and income for local residents. Prior research, however, has yet to show that tourism makes a significant positive contribution to destination communities. As stated by Moscardo (2014), in many cases of tourism development "the benefits have been slow to emerge, modest at best and usually restricted to certain groups within the community" (p.354). Due to the lack of evidence about the benefits of tourism in rural development there is a growing interest in understanding the role of social capital in helping stakeholders make decisions about the degree to which a community should embark on tourism development or whether other forms of income generation be considered.

The aim of this research study is to assess the role of community social capital in launching a community-based tourism (CBT) initiative in a rural area. To this end, a social capital model is used to discuss the degree of readiness of a specific community and offer suggestions to strengthen its social capital. In a nutshell, social capital represents a way of understanding how the social characteristics of communities contribute to successful sustainable development. CBT has been promoted around the world as a means of development for rural and underdeveloped areas for the past 30 years. Many scholars, entrepreneurs, community activists, and tourism planners have attempted to define and identify best practices associated with CBT, which in the absence of an agreed-upon and clear definition can be interpreted in different

ways (Flacke-Neudorfer, 2008; Giampicocoli and Kalis, 2012, Fiorello and Bo, 2012; Kontogeorgopoulos, Churyen and Duangseang, 2014). The Potato Community's interest in planning for CBT stems from the desire of its members to (1) have supplement income; (2) decrease farmers' use of chemicals and promote the health of the community once they are able to generate supplemental revenues; and (3) provide all generations with more work opportunities as young students can be tour guides and elder people be involved in the production of souvenir (e.g. woven baskets) and food for tourists. Two major imperatives in creating CBT at the Potato Community is to; 1) ensure that the local culture will flourish in a sustainable manner; and 2) increase the health of community members. To achieve these objectives, the community plans to develop healthy lifestyles such as clean food and a safe environment free from drug or crimes.

This paper outlines the key factors of social capital in understanding a rural community's readiness in developing tourist products and services. The community, which will be referred to as 'Potato community' includes a group of villages located in Northern Thailand. This study begins with an overview of the relevant studies that cover important contributions in terms of community social capital, rural tourism and innovation. Attention then turns to the research methodology used and a case study that is meant to illustrate how community social capital can be used for CBT purposes. This is followed by a discussion of the findings and suggestions linking social capital with the ability to innovate community products, which are identified and described through a social capital model. The conclusion offers directions for further research.

2. Theoretical Background

Community Social Capital

Social capital refers to resources built up through interpersonal networks and associations upon which individual members of a community can draw (Macbeth et al, 2004). Certain issues have arisen repeatedly in rural tourism development such as whether rural communities have the resources to carry out the tourism process on their own. Rural tourism has often followed the concept, 'market it and see what happens'. According to Lewis (1998), "there are too many rural communities attempting to develop tourism that do not have the necessary means to carry out the process...there is a tendency of rural leaders to not understand the tourism system" (p.101). Rural tourism systems include various levels of government in tourism marketing and management as well as small businesses engaged in tourism activities. They are all part of rural tourism systems. It is Macbeth's position that the use of social capital in rural tourism development needs to have a broader agenda than pointing the finger at communities and telling them to take responsibility. There is also a need for businesses and government to accept the necessity to contribute to building social capital. Both Lewis (1998) and Macbeth (2004) concur that rural leaders have a lack of understanding regarding tourism systems. Both determined that there is a need to understand the social capital as a foundation for innovation in tourism community development. This is in line with what has been generally referred to as a 'systems of innovation' approach to regional development (Macbeth et al, 2004).

Systems of Innovation

The concept of 'systems of innovation' has been used in regional development literature since the early 1990s. These systems have been defined as organizations and institutional arrangements that work together to facilitate the development of new initiatives (Macbeth et al, 2004). Such innovation depends on the social capital of the regional area as well as the complex relationships between individuals and organizations inherent in such a process (Macbeth et al, 2004, Bartholomew, 1997). As Putnam (2000) argues, social capital is a crucial ingredient found in innovative and productive relationships. Although research on innovation

in tourism is limited, especially among small and less privileged tourism providers at the community level (Sakdiyakorn and Sivarak, 2016, Brouder, 2012), researchers have found that emphasizing the examination of social capital, including cultural capital, makes it possible to identify ways in which tourism development contributes to innovation as well as community well-being (e.g. Moscardo, 2014). According to Moscardo (2014), community well-being is made up of different forms of capital. They include social capital (the stock of trust, reciprocity and obligations that derive from social networks and cooperative organizations) and cultural capital (the stock of rituals, crafts, arts and ways of being available to support community celebration and identity). Sakdiyakorn and Sivarak (2016) researched the role of innovation management in cultural capital at Amphawa Waterfront Community, Thailand, and found that social capital can have an important incremental impact on tourism development potential. In the context of this paper, this means that community's social capital can offer small improvements that will have important incremental impacts on tourism development potential as well as on the need to come up with innovative products.

Social Capital Model

Robert Putnam (1993) defined the concept of social capital as the “features of social organization, such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit” that have an effect on the productivity of the community (p.2). Unlike economic capital, social capital is not owned by anyone (Macbeth et al, 2004). In their research on rural communities, Flora, Flora and Fey (2004) link two aspects of social capital: bonding and bridging networks. Both have an affect toward community action. Bonding networks refer to strong connections among individuals and groups with similar backgrounds. Such connections are usually with family, friends, and neighbors. As to bridging networks, they refer to weaker connections among individuals and groups with diverse backgrounds. They typically include people different from themselves, who are engaged in different types of networks such as social organizations. According to Flora et al. (2004), communities with high levels of both bonding and bridging networks are the ablest to engage in effective community action. This is defined as an “entrepreneurial social infrastructure” (2004, p. 66). In contrast communities with weak bonding and bridging networks suffer from extreme individualism and find it difficult to engage in any sort of collective action. The end result is that wealthy or powerful individuals control any process of change in the community. Communities with strong bonding but weak bridging networks tend to have conflicts among separate insider groups vying for control of decision-making.

On the other hand, communities with strong bridging but weak bonding networks tend to leave too much control in the hands of outsiders or community elites. Macbeth (2004) argued that too much bonding in a community can be used to create dysfunctional exclusivity that may end up manifesting in racism and elitism in the community. Furthermore, it can make the community inward looking and resistant to visitors or other outsiders and therefore make it harder for that group to develop reciprocal ties with others whereas bridging associations cross the social and cultural divides of class, ethnicity, gender and education. It could be thus hypothesized that a community with strong bridging associations is likely to be more open to tourists and tourism development as an economic strategy. However, the realization by rural communities that tourism can be beneficial to their livelihood has, in many cases, led them to extend their ‘small-town’ hospitality to tourists from other countries with little difficulty. In this respect, bonding and bridging should not be seen as being too inflexible as they can often change their shape and orientation as the need arises. (Macbeth et al, 2004).

In order to gain a solid understanding of social capital in a Potato Community, the researchers in this study implemented the University of Minnesota Extension Community Social Capital Model as shown in Figure 1. It should be noted that the model offers a third network – a linking network – with a focus on organizations and systems that offer resources to bring about change. Such connections are usually with organizations that have resources, both within and outside of the community.

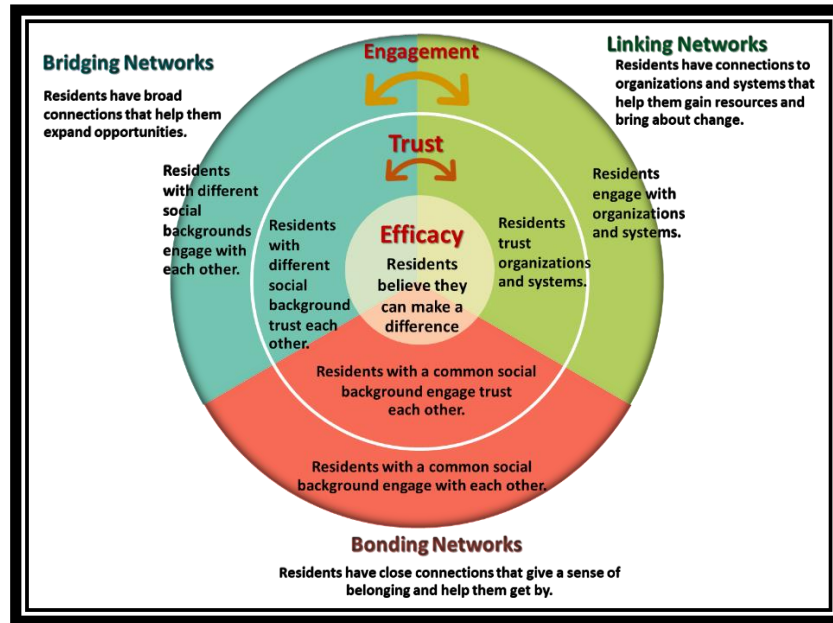


Figure 1: University of Minnesota Extension Community Social Capital Model (Chazdon, S.A. and Lott, S , 2010).*

In terms of ‘systems of innovation’ approach, it has been recognized that certain forms of social capital are more likely to help communities face the challenges of rural tourism development. According to Szreter (1998), groups are able to pursue their shared goals more effectively if they have high social capital in all three components of social capital (bonding bridging, and linking as explained above). Since it is about relationships, it is also about the ability to communicate and trust other members of the networks. Trust and the ability to communicate contribute to groups, communities and regions achieving their goals. The following sections will examine the components of social capital in order to determine their effect on processes that can obstruct or facilitate the growth of innovation for tourism development.

3. Research Design

Methodology

The study research is based on participating action research with tourism stakeholders in a potato community (a group of villages) and was conducted over a one-year period in 2016. Since it offers a bridge between what is happening at the grassroots level and what should be considered by policymakers and utilizes a social capital model to inform the analysis, it can be classified as social research (Ritchie and Lewis, 2003). The research framework was developed in three stages in order to understand and develop plans for tourism development. The first stage identified the stakeholders’ understanding of tourism development and the second stage discussed possible tourism products and services. To obtain information on these issues, focus groups have been shown to be as effective a way to answer the same questions as in-depth interviews, but in a social context (Massey, 2011).

To ensure confidentiality of both the community and the people who participated, the community was given a generic title: Potato Community. Key players are people in the community who are in charge of organizing and managing events and activities for this community. They were invited to meet with the purpose to collectively identify the tourism network under discussion. It was established that the community is well organized around a number of Association Groups consisting of a Monk Association, Village Leader Group, Sub-district Organization (Orbordtor Group), Elder Club, and a Women's Group. A representative from each group was asked to attend meetings regarding village activities and events. The three focus groups consisted of 20-25 people involved with the Association Groups including village members who were interested in tourism development (e.g. restaurant and homestay owners). The meetings were conducted through semi-structured interview surveys which allowed the researchers to analysis the data using qualitative coding technique based on the social capital concepts.

The relevant literature deems this method appropriate since it involves a “naturalistic approach to understanding social phenomena in context-specific settings without researcher manipulation”, instead allowing the “phenomenon of interest to unfold naturally” (Patton, 2002; Tasci, Croes, Villanueva, 2014, p.265). The third stage involved tourism development based on the analysis conducted at stage 1 and 2. It incorporates network management principles, i.e., organization, training, research and development, cooperation and collaboration, and leadership. In order to confirm that plans for tourism and product development were of value to the village a third focus group was formed. Its role was to endorse and edit plans for development wherever necessary. Though the above process, the social capital of the community became apparent (it will be discussed in the following section).

The Potato Community

The community is located an hour drive from downtown Chiang Mai in a National Park which is 80% forest land and 20% villages. As noted earlier, it consists of a group of villages; a total of 9 villages (moobaans); 7 of them are located in the valley and 2 are hill tribe villages (Karen and Lahu) located in the forest and separated from the others. The valley is a fertile ‘bowl’ surrounded by a mountain range. In 2017, the population was 4,632. The main income for the community is farming, which is practiced in a 3-crop cycle; rice, potato and sweet corn. Rice is used by the villagers as their main form of nutrient and is not sold for profit unlike potatoes, which represent the highest form of income for the villagers. Corn is sold and profit used for preparing the rice fields. Corn husks are not burnt but instead grounded and used as fertilizer for the rice field. The researchers were informed that there was no problem obtaining farm labor because people helps each other during the harvesting of crops (this is called “Long Khag”).

Potato crops require a high level of fertilizer and pesticide usage due to the extreme amount of insect and disease control necessary to grow them. Two varieties of potato are grown; one is round, the other long shaped. The round potato is sold to the Frito-Lay Company through a broker, a channel that ensures sales. It should be noted that the Frito-Lay Company does supply the seed, pesticide and fertilizer to the farmers. Long potatoes, which are considered a high value product due to their flavor and visual perfection, are sold to a variety of companies to make French fries. The Community Association has allocated two centers for promoting tourism. One is the largest temple (*Wat*) in the community. The other is the local museum, which features the Lanna culture.

The goals envisioned for these two centers are as follows:

- to be learning centers for other communities to learn about rural sustainable tourism development;
- to develop an exhibition in the local museum for Lanna culture highlighting nutrient, food safety and organic plants with historical information;
- to promote eco-tourism.

Current Level of Tourism

The main tourists are government employees on study tours for rural life. These include government employees from Laos and Vietnam. Other tourists are visitors to the temple. The community prepares places for visitors to stay overnight and provides food. The villagers indicated that they lacked understanding about how to host visitors, especially with regard to the adequate type of food and entertainment. Currently, the average number of visitors is approximately 75 to 100 people a year. Due to the lack of knowledge on tourists needs, villagers are not clear on how to promote or package tourism. They would like to practice working with tourists in order to gain understanding on tourist needs. The local participants at focus groups repeatedly mentioned the concern about the community changing due to an increase in tourism and stated they do not want to be like other communities in Northern Thailand that have grown too big and lost the feeling of neighborhood. In order to control growth, they have agreed not to sell any land to outsiders.

4. Findings

This section first examines the social capital structure and assesses the strength of each of its components (strong, moderate, weak), starting with bonding. It then considers how to increase bonding, bridging and linking within the social capital structure.

Bonding

Recall from above that bonding networks are comprised of close-knit ties that help people function. These connections are usually with family, friends, and neighbors-people who share similar backgrounds (Chazdon and Lott, 2010). The Potato Community is a farming community which values an atmosphere of working together as can be seen by the pride and value the community as a whole places on the practice of “Long Khag” during harvesting. The community is organized into 5 Association groups. The groups need to be represented at all meetings regarding community activities and events.

Table 1: Five Association Groups

Association Groups	Membership
Monk Association	Members are from local temples
Moo Baan Leader Group	Members are voted to become a leader by each of the 9 villages (moo baan)
Sub District Organization (Orbordtor Group)	Members are voted to become a leader by the (9) villages
Elder Club	Volunteer
Women’s Group	Volunteer

The type of activities and events the Association is involved with focus on temple holidays, farming activities and local events such as preparing for local cultural activities that take place throughout the year. It was noted through the year study that the Association groups were able to plan and develop a weekend event to highlight the Lanna culture and food at the local museum. The event consisted of a display of local attire and food was prepared in the traditional

methods. The Association was also able to organize and build a 40-kilometer bike path through the community where locals meet every Saturday morning to ride together. Based on the community's organization structure, activities and events developed, it can be said that the bonding component is strong.

Bridging

Bridging networks can help people get ahead and gain opportunities. These networks are usually with people who are different from themselves who are engaged in different types of activities such as employment or social clubs. The community showed a low level of bridging networks. For example, the two hill tribe villages were considered different from the rest and there was some animosity towards them receiving more outside aid in the form of training in growing tea, coffee and basket weaving. Some in the community felt it gave them an unfair advantage in terms of tourist souvenirs. During the focus group discussion, it was determined that products from the two villages could be an interesting and valuable site as a tourist destination and community members started to understand the need to create stronger bonds with the two villages. The Potato Community is considered to have a low bridging network reflected by the idea not to sell land to outsiders, which could be an obstacle for tourism development. Outside people bring new ideas for tourism products such as new food recipes and lodging.

Linking

Compared with bridging networks, which connect individuals who are not alike but yet more or less equal in terms of status or power, linking networks are based on "vertical" power differentials. Linking networks include ties to formal institutions as well as individuals with power and resources. The Potato Community has strong links with government agencies and local temples but has moderate links with research institutes that provide training for development. The weak link is with private business. Table 2 provides a list of the links the community is involved with and the support the institution provides.

Table 2: The Potato Community's Links and Support

Who	Type of Support
Orbordtor Group (SOA)	Budgets, supports food process (example mango)
District Office/Thesatban	Plans about sufficiency economic projects
Sor Ka Wa	Food safety
Sor Sor Sor	Supports the budget and is the mentor for developing quality of life the community
Chiang Mai University	Organic farming and food safety
Royal Project	<ul style="list-style-type: none"> • Major support – plan together tourism activities with matching funds • Supports Baan Mae Sai Meing (hilltribe village) to grow Assam tea, passion fruit, coffee • Support Karen village to produce bamboo baskets • Teach how to make natural or bio fertilizer for organic farming • Will support locals to visit other locations and train about tourism
Wat	Center for community activities and tourism, helps with sufficiency projects and nature conservation

The Potato Community has strong bonding that allows for community events and activities to be created. However, as noted about bonding networks which may work against wider social capital development and undermine trust and confidence. This became apparent when discussing with local focus group participants the need for a tourism committee to be developed. At the time of the study three local homestay entrepreneurs were involved in the discussion and valued the creation of a tourism committee while other participants could not understand the value of a tourism committee. Participants who were not interested in planning a tourism committee believed the committee was for the local entrepreneurs and had nothing to offer the entire community. It seemed a lack of trust and understanding had arisen and the leader of the Potato Community was not able to influence the discussion of how a tourism committee could be of value to the community at large. This is where the need for further bridging is of value among regional networks.

A five-year strategic plan for tourism has been written by the local Orbordtor Group. The strategy focus is for the Wat to be the leader in developing tourism for the area. However, the majority of participants at the focus groups did not understand what value they would obtain in tourists visiting the temple since they do not have any type of business that would support community tourism.

5. Discussion and Conclusion

This study enabled the researcher to meet with a wide variety of community members. The findings suggest that for the community to develop a CBT initiative it would be necessary for a tourism committee to be created and to focus on methods that include the community diversity. Moreover, since the community as a whole suffers from a lack of entrepreneurial activity among its residents, there is a need for further training in entrepreneurial education. This would bond the community and help promote a system of innovation. As noted in the literature review, horizontal associations (bridging and bonding) allow for community spirit. They can, however, stifle growth due to a lack of trust of outsiders.

For CBT to develop within the community, individual members would need to feel that they are part of the initiative and would need to believe that it would give them value either in an individual monetarily manner or by increasing their quality of life. This can be accomplished by a stronger connection between products already grown and tourism. One local group interested in branding the local potatoes is the local Orbordtor Group, which would need to create a local potato coop among residents.

The researcher suggests that the Orbordtor Group should be the leader in forming a potato coop. The outcome should be the branding of the local potato. In this way a bonding would be created that has monetary value and would increase trust among the local residents. At the same time, linking with regional networks would help to add-value to the product in the form of packaging or marketing. The rationale for this suggestion is that the community's strength is potato farming. The researcher has noted a lack of understanding among focus group participants' on how tourism would be of value to the community as a whole. If a potato coop is designed and developed so as to include the majority of community members it will be the first step in creating an entrepreneurial community enterprise. Through the creation of a potato coop lessons can be learnt and shared about growth in entrepreneurial activities and what is necessary for a CBT to succeed.

The community's objective for creating a CBT is to ensure that local cultures will flourish in a sustainable manner and also to increase the health of community members. The community, however, does not have any regional connection with tourism companies, which will make it difficult to develop a CBT. But the community's regional connections are well

developed among farming and food production. Since the objective of the CBT initiative is to ensure sustainable growth and enhance the health of its members, the main focus should then be to ensure that the main cash crop is grown in a sustainable manner and decrease the chemical input in farming potato. By ensuring a lower use of chemicals in farming potato the community can promote itself as a healthy group of villages, which is part of the community's tourism plan. For the moment, however, the current use of chemicals in farming is too high to achieve this objective. The level of chemical use thus decreases the chance for the community to be able to promote itself as a healthy one.

Conclusion

Applying a social capital approach to studying the value of CBT initiative allows for suggestions to be developed that focus on the strength of the community and the types of connections that are necessary to implement CBT in rural areas. The findings suggest that the village is at the beginning stage of readiness to implement tourism initiatives based on the social capital dimensions. Suggestions were given to develop stronger connections with outside tourism operators or agencies, something which is possible through various social enterprises that are already marketing Thai CBTs.

The social capital approach allows researchers to note the disconnection among local community members in developing CBT and to suggest methods to focus on the strengths of the community, such as potato farming. The 5-year plan developed by the village envisions the 'Wat' to be the leader in developing tourism in the area. For this plan to be effective, a tourism committee would need to be organized and managed with a focus on promoting Wat visits along with local tourist activities, such as trekking, rafting, and on partaking in locally prepared meals. These activities represent methods to strengthen the social bonding and trust among village members and would be an opportunity for the village to achieve its goals to obtain supplemental income and have more opportunities for work such as tour guides.

For a system of innovation to be of value to a community, it has to be based on trust and the ability to communicate which help groups, communities and regions achieve their goals. Suggestions for strengthening the potato coop is for it to become more engaged in finding methods to lessen chemical inputs, market and brand the main cash crop as well as promote local created recipes. These are essential steps towards building trust and communication among the community and also building relationships with outside organizations such as universities, which can train villages for better farming methods and local healthy food recipes. Working with university researchers and outside social enterprises involved with community tourism could help the village overcome weaknesses in its social capital regarding bridging and linking.

This study contributes to the understanding of the role of social capital in developing innovation for rural tourism. However, further studies are necessary in respect of methods to strengthen social capital horizontally and vertically (bonding, bridging and linking) as a tool to achieving sustainable development. Conducting a community readiness study would further the understanding of the role of leadership in providing opportunities for development growth.

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Contribution of Marketing Capability to Social Media Business Performance

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Abstract

This research examines the contribution of marketing capabilities to the social media business performance of Thai firms. The outside-in and inside-out capabilities of Day (1994)'s marketing capabilities framework are used to develop five aspects of marketing capabilities related to social media business, including (1) market-sensing capability, (2) customer-linking capability, (3) channel-bonding capability, (4) technology development capability, (5) and employee development capability. Questionnaire data were collected from 364 entrepreneurs who sold products via social media channels. The results from the partial least squares structural equation modeling show that when all five aspects of marketing capabilities are analyzed separately, all of them significantly account for social media business performance. However, when all five aspects of marketing capabilities are analyzed together, only technology development capabilities and employee development capabilities turn out to be the most influential factors accounting for social media business performance.

Keywords: marketing, capabilities, social media, strategic management, e-business

1. Introduction

In Thailand, social media such as, for example, Facebook and Instagram have become popular channels through which firms market their products and services. With the increasing social media activity of Thai consumers, businesses in most sectors tend to rely increasingly more on social media for their marketing activities (Leesa-Nguansuk, 2016). According to data from the Digital Advertising Association of Thailand (DAAT, 2017), digital advertising spending in social media platforms has grown substantially, particularly on Facebook. Data from the Electronic Transactions Development Agency (ETDA, 2017) indicates that in Thailand, in 2015, businesses with assets valued at less than 50 million baht mostly relied on social media channels for marketing. This has created tough competition for firms that sell through social media channels. Sasatanun and Charoensukmongkol (2016) argue that many firms used social media to sell products simply because they just followed what other companies did. These firms, however, do not have well-planned strategies to help them effectively utilize social media. Since most firms in Thailand are at the early stage of the social media marketing adoption, it is therefore essential for them to understand the importance of firm capabilities related to social marketing. This is crucial for them to successfully implement social media marketing strategies that outperform competitors.

The objective of this research is to determine the contribution of firms' capabilities related to social media marketing. First, the conceptualization of marketing capabilities related to social media is based on an outside-in and inside-out marketing capabilities framework. This framework identifies five capabilities, which include (1) market-sensing capability, (2) customer-linking capability, (3) channel-bonding capability, (4) technology development capability, and (5) employee development capability. This research examines

the association between each marketing capabilities and the level of performance that firms gain from social media businesses. The main research question is whether firms that exhibit these aspects of marketing capabilities tend to attain a more favorable performance via their use of social media businesses. The theory this research relies upon to explain the linkage between marketing capabilities and firm performance. is Barney's 1991) resource-based views of firms.

This research contributes to the literature in several ways. Although prior research has examined the contribution of social media utilization to business performance, most of it only focused on the broad utilization of social media without considering how social media are utilized and integrated with the marketing capabilities of firms (Braojos-Gomez, Benitez-Amado, & Llorens-Montes, 2015; Culnan, McHugh, & Zubillaga, 2010). The conceptualization of marketing capabilities related to social media will provide valuable insights to fill this research gap. From a practical perspective, this study will also provide guidance for Thai firms to understand how to effectively utilize social media to build competitive strength. More specifically, this contribution is consistent with the "Thailand 4.0" governmental initiative which emphasizes the capability development of Thai firms by focusing on the integration of technology to create the competitive strength of firms. The results from this study will provide guidance regarding the strategy of firms to effectively integrate social media technology with marketing activities to enhance competitiveness according to the policy.

2. Literature Review

The framework of marketing capabilities in social media business is considered first. Next, this section discusses outside-in and inside-out capabilities.

2.1 Framework of Marketing Capabilities in Social Media Business

Gunelius (2011) defines social media marketing as "any form of direct or indirect marketing that is used to build awareness, recognition, recall, and action for a brand, business, product, person, or other entity" (p. 10). According to Tuten and Solomon (2013), social media marketing is the adoption of social media platforms to influence consumer behavior. Firms adopt social media marketing to achieve their marketing objective, which is to generate value for the customer, by integrating social media marketing with other marketing communication tools (Dahnil et al., 2014). However, research suggests that firms that can successfully implement social marketing to create the superior performance need to possess resources and capabilities to support the operation (Trainor et al., 2014). Theoretically, the contribution of firm resources and capabilities can be explained by the resource-based view (RBV) of a firm as proposed by Barney (1991).

RBV predicts that the ability of firms to outperform competitors depends not only on the possession of superior resources that are difficult for other firms to develop but also on their need to have the ability to transform those resources into capabilities (Barney, 1991). Capability can be defined as a firm's ability to deploy resources to achieve the firm's objectives (Dutta et al., 1999). Especially in the area of marketing, studies showed that firms with a strong marketing capability can effectively mobilize their resources to create appropriate strategies and to implement their strategies to gain a competitive advantage (Day, 1994). Prior evidence also showed that firms equipped with superior marketing capabilities tended to achieve a higher performance than firms that did not (Chang et al., 2010; Nath et al., 2010). Although there are various frameworks of marketing capability in literature, this research adopt the marketing capabilities framework of Day (1994).

This framework is regarded as a comprehensive framework of marketing capabilities that has been widely adopted by many researches (Chahal & Kaur, 2014). Specifically, the outside-in capabilities and inside-out capabilities of the framework are selected and used to apply to social media marketing activities.

2.2 Outside-In Capabilities

Outside-in capabilities are capabilities of firms that enable them to understand market requirements better than their competitors. They also help firms build good relationships with customers and channel members (Day, 1994). Outside-in capabilities also facilitate proper implementation and reaction to changing market conditions, which help firms to meet customer expectation and achieve a better performance (Chahal & Kaur, 2014). These capabilities can be classified into three types: (i) market-sensing capability, (ii) customer-linking capability, and (iii) channel-bonding capability (Day, 1994; Mu, 2015).

(i) Market-Sensing Capability

Market-sensing capability refers to a firm's ability to acquire and disseminate customers, competitors and market information and utilize market knowledge to forecast and monitor market changes (Day, 1994). Market-sensing capability in social media marketing represents a firm's ability to perform these tasks (Quesenberry, 2016). For example, firms can utilize Facebook by creating their own page and encourage Facebook users to "Like" their page so that firms can access users' information. This allows marketers to obtain basic customer information from their profile page (Sasatanun & Charoensukmongkol, 2016). At the same time, marketers can spot market trends from Facebook because when people click "Like" on company page, it allows marketers to monitor online conversations that people share with their friends and to understand consumers' opinions about the firm or the firm's activities (Schweidel & Moe, 2014). Furthermore, competitors' information can be accessed through Facebook and Instagram channels when the marketer likes or follows their competitors' Facebook page or Instagram. This allows marketers access to information of their competitors' movements, such as new products and marketing activities. *

(ii) Customer-Linking Capability

Customer-linking capability represents the ability of firms to both identify customer needs and build and maintain customer relationships (Day, 1994). From this perspective, this study views customer-linking capability in a social media marketing context as a firm's ability to identify customer needs by connecting and interacting with customers, as well as their ability to create and to strengthen customer relationships by using social media platforms. As social media has distinct functions that allow users to generate the content and to communicate and share information among their online network, it increases opportunities of interaction between customers and businesses, enables customer participation, and provides customer support through social networks (Pentina & Koh, 2012). For example, firms can create an official social media page that allows customers to give feedback through comments, which allows firms to learn more about customer needs and preferences (Trainor et al., 2014).

(iii) Channel-Bonding Capability

Channel-bonding capability represents a firm's ability to connect and leverage a firm's resources and capabilities with partners or channel members, such as suppliers and distributors (Day, 1994). From this definition, channel-bonding capability in social media marketing represents the ability of a firm to use social media as a tool to interact and communicate in order to build relationships with channel members. Today, the emergence of social media technology allows firms to easily interact, communicate, build trust, and strengthen relationships with their channel members at a lower cost (Michaelidou et al., 2011). Suppliers can also utilize social media platforms to create more interpersonal

connections with retailers (Sasatanun & Charoensukmongkol, 2016). They can share information such as company profiles, events, incentives, and promotions with channel members through various social media platforms.

2.3 Inside-Out capabilities

Inside-out capabilities focus on the roles of internal resources that involve different functional activities within an organization. According to Trainor et al. (2011), inside-out capabilities can be developed by integrating three organizational resources consisting of IT resources, business resources, and human resources. Inside-out capabilities also include activities such as production and transformation, logistics, cost control, financial and human resources management, and technological development (Chahal & Kaur, 2014; Day, 1994; Hooley et al., 2005; Santos-Vijande et al., 2012). Based on the conceptualization of Day (1994), this study focuses on two aspects of inside-out capabilities that are related to social media marketing: (i) technology development capability and (ii) employee development capability.

(i) Technology Development Capability

Technology development capability refers to the firm's ability to develop new technology to respond to the rapid change of the technological and competitive environment (Song et al., 2005). In this study, technology development capability in a social media context presents a firm's ability to make effective utilization of technical skills and knowledge to develop and improve existing social media related-technologies as well as to generate new technical skills and knowledge to respond to the rapidly changing technological and competitive business environment. In this regard, it is important for companies to effectively use and develop social analytical technology to collect, store and analyze the large amount of data obtained from social media channels (Chen, Chiang, & Storey, 2012; Dinter & Lorenz, 2012). In this sense, the firms that possess the ability to develop and improve social media technology and effectively utilize this technology to evaluate customer insights are likely to achieve a superior business performance (Choudhury & Harrigan, 2014; Greenberg, 2010; Woodcock et al., 2011).

(ii) Employee Development Capability

Trainor et al. (2011) view human resources as an essential element of e-marketing capability that positively influences firm performance. This capability includes providing employees with training, increasing employee motivation through rewards, and encouraging employees to make decisions on their jobs (Orr et al., 2011). In social media marketing, employee development capability can be built by offering regular training to employees about social media marketing tools and market trend in order to enhance their social media marketing skills. In addition, employees can be motivated and be empowered to make decisions on social media marketing tasks. Furthermore, management can provide employees with regular performance feedback and appropriately provide rewards for employees' achievements.

3. Hypothesis Development

Grounded in RBV, this research proposes that all aspects of outside-in capabilities related to social media can show a positive association with social media business performance. Firstly, firms with a high level of *market-sensing capability* are able to effectively utilize social media applications to acquire and disseminate customer, competitor, and market information, as well as to spot market opportunities by using the information obtained from customers' online conversations and feedback via social media channels (Castronovo & Huang, 2012; Trainor et al., 2014). Consequently, these firms can easily access customers, competitors, and market information, which allow them to learn more about their customers and competitors

as well as market trends (Slater & Narver, 2000). Secondly, *customer-linking capability* facilitates strong relationship development and maintains relationships between firms and customers (Hooley et al., 2005). Firms that effectively and appropriately use social media platforms to identify customer needs, and also interact with their customers in order to build and maintain relationships are likely to have better performance (Sasatanun & Charoensukmongkol, 2016; Kevin J Trainor et al., 2014). Thirdly, *channel-bonding capability* represents the ability of firms to connect and leverage resources and capabilities with their channel members (Mu, 2015). Thus, firms that can use social media platforms appropriately can strengthen relationships and build strong trust with channel members (Swani et al., 2014). This might lead to a high level of coordination among channel members and, subsequently, benefit firm performance. Therefore, we can hypothesize that:

H1: *Market-sensing capability positively associates with social media business performance.*

H2: *Customer-linking capability positively associates with social media business performance.*

H3: *Channel-bonding capability positively associates with social media business performance.*

This research proposes that two aspects of inside-out capabilities which firms develop can also relate positively with social media business performance. First, regarding *technology development capability*, prior research suggests that technology allows firms to interact and connect with customers effectively, which can lead to customer satisfaction and relationship development (Jayachandran et al., 2005). Thus, firms with the ability to identify and utilize new social media technologies that is capable of supporting business processes can interact and build good relationships with customers, which, in turn, can ultimately benefit firm performance (Trainor et al., 2011). Lastly, *employee development capability* can also support the social media performance of firms. This is because when employees have high levels of social media technology skills and competencies, they tend to be more effective in implementing marketing activities through social media which creates favorable customer experiences and helps firms increase performance. Therefore, the following hypotheses can be formed.

H4: *Technology development capability positively associates with social media business performance.*

H5: *Employee development capability positively associates with social media business performance.*

4. Methodology

Sample Selection and Data Collection Method

To date, there is no official list of the firms in Thailand that sell through social media. Therefore, convenience sampling was used for the sample selection. Data were collected from a group of entrepreneurs who participated in seminars and training programs organized by the Ministry of Commerce in various locations in Thailand. The study used self-administered questionnaire surveys to collect data. To confirm that they were qualified as a valid sample, entrepreneurs were asked, prior to the questionnaire distribution, whether their business sold products through any social media channel (e.g. Facebook, Instagram). A total of 697 entrepreneurs met this criterion and questionnaires were distributed to them in person. They were asked to fill in it at their convenience and return it back to the researcher in person. In the end, the researcher received a total of 364 usable questionnaires, which was a 52.22 percent response rate.

Table 1: Characteristics of Samples

Variables	Descriptive statistics
Firm Age (years)	Mean: 11.14 S.D.: 13.79
Firm Size (number of full-time employees)	Mean: 95.96 S.D.: 423.42
Social media marketing experience in business (years)	Mean: 3.03 S.D.: 2.39
Business Sectors	Manufacturing: 78 (21.4%) Service: 104 (28.6 %) Wholesales: 47 (12.9 %) Retail: 118 (32.4 %) Restaurant: 5 (1.4 %) Real-estate: 3 (0.8 %) Other: 9 (2.5 %)
Presence of Physical Store	Yes: 188 (52 %) No: 168 (46 %) Missing: 8 (2%)

Measurements

Since, to date there is no scale available in the relevant literature to measure social media marketing capability, the measures of each aspect of social media marketing capability have been developed based on existing marketing capabilities scales. The question statements were modified to make them relate to social media marketing activities.

- *Market-sensing capability* was measured by using the scale adapted from Fang et al. (2014); the scale consists of three items.
- *Customer-linking capability* was also measured by using the scale adapted from Fang et al. (2014); the scale consists of four items.
- *Channel bonding capability* was measured by using the scale adapted from Mu (2015); the scale consists of five items.
- *Technology development capability* construct was measured by using the scale adapted from Zhou and Wu (2010); the scale consists of three items.
- *Employee development capability* was measured by using the scale adapted from Orr et al. (2011); the scale consists of five items.

All items were rated on a five-point Likert scales ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). All questions were content validated by social media marketing experts who had experience with social media marketing. A pilot test was then conducted with a small group of entrepreneurs to make sure that the question statements were clear to the respondents. An exploratory factor analysis (EFA) and the Varimax orthogonal method were used with the final data. *Social media business performance* was measured subjectively. Prior research suggests that a subjective measurement of firm performance can be used instead of objective measurement when data are collected from emerging countries where businesses tend to be unwilling to disclose objective performance (Peng, 2000).

Prior research also provides evidence about a high correlation between subjective and objective measures of performance (Brouthers et al., 2009). The scale for social media business performance developed by Sasatanun and Charoensukmongkol (2016) was selected. The respondents were asked to indicate to what extent they are satisfied with five aspects of performance from social media business including: (1) sales volume, (2) sales growth, (3) profit, (4) profit growth, and (5) return on investment. All items were rated on five-point Likert scales ranging from 1 (very dissatisfied) to 5 (very satisfied). The quality of internal consistency was satisfactory ($\alpha=.954$)

Control Variables

The characteristics of firms that might affect firm performance were put as control variables in the data analysis. These characteristics are *firm size*, *firm age*, *social media marketing experience*, and *presence of physical store*. *Firm size* was measured by the number of full-time employees. *Firm age* was measured by the number of years that a firm has been established. *Social media marketing experience* was measured by the number of years that a firm has been doing business through social media. Lastly, *presence of physical store* was measured as a dummy variable, whereby firms that have a physical store were coded 1.

Statistical Analysis Method

Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to analyze data. First, PLS requires a smaller sample size than other SEM techniques (Chin, 1998). Secondly, PLS requires fewer statistical specifications than the covariance-based strategy, since it does not require normally distributed data (Chin, 1998). Because the results from a normality test showed that many variables in the model were not normally distributed, PLS was considered as an appropriate method for this research.

5. Results

The results listed in Table 2 show that all question items loaded correctly into their underlying factors and also exhibited a satisfactory level of internal consistency.

Table 2: Results from Exploratory Factor Analysis

Items	Technology development capability	HR development capability	Channel bonding capability	Customer-linking capability	Market-sensing capability
We can discover competitors' strategies and tactics by using social media.	.231	.113	.101	.136	.704
We can learn about the macro-market environment by using social media.	.242	.123	.105	.124	.814
We can identify and understand market trends by using social media.	.168	.187	.193	.100	.795
We learn about customer needs and requirements by using social media.	.150	.033	.178	.262	.737
We are good at maintaining and enhancing relationships with customers by using social media.	.168	.118	.146	.788	.126
We have a strong relationship with key target customers by using social media.	.118	.167	.181	.786	.167
We are good at using social media to understanding what customer's need and require.	.216	.093	.197	.740	.228
We are good at establishing relationships with customers by using social media platforms.	.271	.081	.207	.769	.112
We routinely provide employees with opportunities for training in social media marketing-related area.	.169	.827	.062	.093	.121
We systematically provide employees with regular feedback about their social media marketing performance.	.194	.868	.087	.093	.104
We provide regular opportunities for developing employee skills to perform social media marketing tasks.	.161	.800	.062	.141	.135

We regularly reward on social media marketing performance as a means of increasing employee motivation.	.159	.797	.230	.074	.076
We regularly empowering employees to make decisions about their social media marketing tasks.	.158	.739	.194	.081	.052
% of Variance explained	38.661	10.101	8.395	6.968	6.202
Eigenvalues	9.272	2.424	2.015	1.672	1.489
Cronbach's alpha	0.844	0.866	0.864	0.908	0.896

All the latent-variable scales were checked for validity and reliability. The convergence validity was assessed using factor loadings and the factor loadings of all the variables were found to be higher than the minimum requirement of .5. The discriminant validity was assessed by seeing whether the square root of the average variance extracted (AVE) was greater than correlations between the constructs (Fornell & Larcker, 1981). The results shown in Table 3 indicate that the variables met this requirement. The construct reliability was assessed using Cronbach's alpha coefficient. The results show that all of the variables exceed the minimum requirement of .7 (Nunnally, 1978). Lastly, the multicollinearity was determined using the full variance inflation factor (VIF) statistics. Petter, Straub, and Rai (2007) recommend that the full VIF should be lower than 3.3. The findings in this study research passed this requirement.

Table 3: Correlations among Variables and Convergent Validity

Variables	MSC	CLC	CBC	TDC	HRDC	SMBP	AGE	SIZE	SBE	PS
MSC	(.831)	.461**	.415**	.474**	.325**	.192**	.068	.107	.038	.105
CLC		(.846)	.496**	.487**	.334**	.213**	.046	.105	.084	.079
CBC			(.809)	.482**	.38**	.222**	-.042	.092	-.011	.046
TDC				(.846)	.458**	.299**	-.031	.093	.027	.023
HRDC					(.846)	.358**	-.075	.118*	.028	.064
SMBP						(.898)	.174**	-.026	.033	.069
AGE							(1)	.342**	.369**	.245**
SIZE								(1)	.187**	.08
SBE									(1)	.166**
PS										(1)

Notes: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$;

The average variances extracted from the latent variables are shown in parentheses.

MSC=market-sensing capability; CLC=customer-linking capability; CBC=channel bonding capability;

TDC=technology development capability; HRDC=human resource development capability; SMBP=social media business performance; AGE=firm age, SIZE=firm size; SBE=social media business experience;

PS=presence of physical store.

Table 4 shows the results from the PLS-SEM analysis. Standardized path coefficients and p-values are reported. First, each aspect of the marketing capabilities was analyzed separately (as shown in Models 1-5) to examine their contribution independent of each other. Then, all five aspects of the marketing capabilities were included together (as shown in Model 6) to examine which aspects of the marketing capabilities exert stronger influences when compared to one another. The results from Model 6 were used for hypothesis testing.

Table 4: Results from PLS Estimation

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Hypothesis Variables</i>						
Market-sensing capability	.195***	n/a	n/a	n/a	n/a	.024
Customer-linking capability	n/a	.208***	n/a	n/a	n/a	.04
Channel bonding capability	n/a	n/a	.209***	n/a	n/a	.025
Technology development capability	n/a	n/a	n/a	.288***	n/a	.136*
Employee development capability	n/a	n/a	n/a	n/a	.338***	.247***
<i>Control variables</i>						
Firm age	-.251***	-.243***	-.229***	-.223***	-.192***	-.192***
Firm size	.013	.012	.006	-.001	-.022	-.033
Social media business experience	.101*	.087	.102	.091	.085	.082
Presence of physical store	.092*	.097*	.098*	.102*	.082*	.079
R-square	.09	.096	.096	.135	.163	.19

Notes: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$;
Standardized coefficients are reported.

The first five columns of Table 4 separately show the results from the estimation that analyzes the relationship between each aspect of the marketing capabilities and social media business performance. The results support a positive contribution of market-sensing capability ($\beta=.195$; $p<.001$), customer-linking capability ($\beta=.208$; $p<.001$), channel-bonding capability ($\beta=.209$; $p<.001$), technology development capability ($\beta=.288$; $p<.001$), employee development capability ($\beta=.338$; $p<.001$); all of which were statistically significant. The last column of Table 4 lists the results incorporating all five aspects of the marketing capabilities in the estimation. Only the contribution of technology development capability ($\beta=.136$; $p<.001$) and employee development capability ($\beta=.247$; $p=.021$) are positive and statistically significant. Thus, it can be concluded that only hypothesis 4 and hypothesis 5 are significantly supported.

6. Discussion and Conclusion

The objective of this research is to study the contribution that marketing capabilities make to the social media business performance of Thai firms that sell via social media channels. The conceptualization of marketing capabilities was initially developed based on Day's (1994) outside-in and inside-out marketing capabilities framework. Marketing capabilities were classified into five aspects: market-sensing capability, customer-linking capability, channel-bonding capability, technology development capability, and employee development capability. The measurement scales of these aspects of marketing capabilities were then developed and also proven to have good psychometric properties.

Regarding the contribution of marketing capabilities, the results from the PLS regressions show that all five aspects of the marketing capabilities have a positive and significant association with social media business performance when analyzed separately. These results suggest that firms that demonstrate more satisfactory social media business performance tend to exhibit each of these five marketing capabilities. However, when all of these five aspects of marketing capabilities were included together in the analysis, only technology development capability and employee development capability were the aspects of marketing capabilities that still significantly explained social media business performance.

This suggests that among all five aspects of the marketing capabilities, these two aspects seemed to exert a stronger impact on social media business performance than the other aspects of the marketing capabilities did. In general, the results regarding the contribution of marketing capabilities were consistent with RBV theory, which highlights the importance of firm-specific capabilities and the critical role they play in helping organizations utilize resources to build competitive strength (Barney, 1991). In particular, it can be concluded that the ability of firms to develop marketing capabilities for social media businesses may help them create competitive strengths and allow them to achieve a more satisfactory performance than other firms.

The results were also in line with prior research which supported the contribution of marketing capabilities to the performance of a firm (Chang et al., 2010; Nath et al., 2010). Moreover, they were consistent with the study of Sasatanun and Charoensukmongkol (2016) which suggested that firms cannot achieve better performance just by the use of social media to sell products, unless they are able to incorporate social media business applications with the firm's strategy. However, there are some limitations that need to be discussed. Firstly, the data were collected from a small number of business owners who participated in trainings and seminars, which may not be a precise representation of the population of firms in the country. Secondly, using a self-report measurement of firm performance could possibly make the data susceptible to subjective bias. Thirdly, because cross-sectional data were used for data analysis, the results could only be interpreted in terms of association rather than causation.

The findings from this study provide a significant contribution to prior research in the field of social media business. In particular, the conceptualization and measurements of social media marketing capabilities based on Day's marketing capabilities framework provide additional insight regarding the means by which social media can be incorporated into the marketing strategies of firms that allow them to achieve a better performance in social media business. Moreover, future research may use the scales developed in this research to extend the study by examining the role of marketing capabilities related to social media business in other groups of samples. As managerial implications, the results from this research provide some useful suggestions for companies that sell through social media channels.

Today, an increasing number of companies have begun to use social media platforms to sell their products. This has made competition more intense than ever before. If firms cannot provide buyers with a favorable buying experience that is different from other sellers, it might be difficult for them to attain superior performance in this business. Therefore, it is vital for firms to identify some sources of competitive advantage which can help them compete more effectively. In particular, companies need to learn to implement social media marketing strategies to differentiate themselves from other competitors. Based on the main findings of this study, companies might need to develop marketing competencies, particularly in the areas of technology utilization and staff training which are the areas that are most relevant to social media business performance.

First, regarding the role of technology utilization capability, it can be concluded that just using social media as a channel to sell a product is not enough. It is therefore critical for firms to have an in-depth understanding about how social media technology can be applied to enhance marketing strength. For example, they will need to learn how to effectively use and develop social analytical technology to collect, store and analyze the large amount of data obtained from social media channels in order to guide their marketing decisions.

Secondly, regarding the role of employee development capability, companies will need to provide employees with training about social media marketing in order to increase their ability to handle marketing activities in the most effective and efficient way. Companies also need to motivate employees to take part in social media marketing implementation and reward them appropriately for their achievements. As employees are the persons who take key responsibilities in handling the operational tasks of the firm, having a competent and knowledgeable workforce to implement social media marketing can potentially enhance the ability of firms to be successful in social media business.

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A Comparative Study of the Leadership Styles of Kwon Ping Ho (Banyan Tree Hotels and Resorts) and Kwek Leng Beng (Millennium Hotels and Resorts)

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Abstract

Leadership is an essential factor of successful management. The objective of this paper is to investigate the leadership styles of two ASEAN hospitality leaders in managing the two largest hotel chains in Asia, namely, Banyan Tree Hotels and Resorts and Millennium Hotels and Resorts. The findings reveal that strong leadership styles and approaches by the two chains have led to the success of their respective organisations. Transformational, servant and transactional approaches have significantly influenced the management of organisations in today's fast-changing business environment. Furthermore, this study provides perspectives through which it is possible to better understand ASEAN hospitality industry.

Keywords: Leadership style, hospitality industry, ASEAN leaders, comparative study.

1. Introduction

Organisational leadership is an essential element in achieving success in business. The definition of leadership has been widely debated, as different people associate varied meanings to the concept. However, leadership is generally accepted as being a process whereby an individual influences a group of people to achieve common goals (Alexakis, 2011). Leadership has also been defined as the way through which a leader supports, engages and induces all concerned stakeholders to pursue the organizational mission and vision (Gill, 2011). Crother-Laurin (2006) defines leadership as "a commitment to the success of the people around you." (p.7). Therefore, holders of leadership positions significantly influence the success and sustenance of the organisation.

The topic of leadership has gained attention from researchers in various contexts (Kamisan & King, 2013), such as leadership across culture (Trompenaars & Voerman, 2010), servant leadership (Greenleaf, 2002) and leadership styles and approaches (Humphrey, 2014; Ibarra, 2015; Lussier & Achua, 2010). Recently, more profound contexts of leadership styles have been examined by researchers, such as transactional and transformational leadership (Patiar & Mia, 2009). As many aspects of leadership have been investigated, core leadership theories have emerged over time, including Traits, Behavioural, Contingency, Power and Influence, Servant Leadership, Transactional and Transformational Theories.

According to Kozak and Uca (2008), leadership styles are vital. The effective utilization of leadership styles can improve work atmosphere, enhance service performance and develop positive relationships with associates. Like in other industries, the hospitality industry considers human resources as a valuable asset. Customer experience and satisfaction mainly rely on services provided by the workforce. When hospitality staff is satisfied with the working environment, the tendency is high that good quality of service shall be delivered to the customer (Alexakis, 2011).

By contrast, failure of leadership leads to ineffective performance, high employee turnover rate and customer dissatisfaction (Kara, Uysal, Sirgy, & Lee, 2013). For these reasons, organizational leadership is to be considered a key element of success for a hospitality organization. As argued by Kamisan and King (2013), no leadership style is best in all circumstances, as effective leaders should be sensible in selecting the best style in managing and handling their followers. Thus, an effective leader should continue searching for the best leadership methods to fit in any situation (Nahavandi, 2009).

This paper aims to compare leadership styles between two leaders in their sector, namely, Kwon Ping Ho (Banyan Tree Hotels and Resorts) and Kwek Leng Beng (Millennium Hotels and Resorts) who are both well known in the ASEAN hotel business industry. It also aims to investigate how these ASEAN leaders have led their respective organizations to success amidst a dynamic business world. Three potential leadership domains (i.e. transactional, transformational and servant) are discussed and employed as foundations throughout the research. The central research questions of this study are as follows:

- 1) What leadership styles should hotel business leaders adopt to manage their organizations in a fast-changing business environment?
- 2) Do successful ASEAN hotel business leaders implement the same or different styles of leadership?

This paper blends research and application to present the leadership performances of the ASEAN hotel business leaders and uses experience and evidence from related hospitality disciplines.

2. Literature Review

- *Transactional and Transformational Leadership*

In the last several decades, the hospitality industry has experienced dynamic changes, such as a global economic downturn, intense competition and rapid technological development (Tracey & Hinkin, 1996). To manage the changing environment and ensure organizational stability, a hospitality firm may require transformational style of leadership (Tracey & Hinkin, 1994). However, prior to the emergence of transformational leadership, transactional leadership was the most popular concept in managerial leadership (Moore & Rudd, 2006). Transactional leaders emphasize task completion, control procedures and organizational rewards (Felfe & Schyns, 2006). To influence employee performance, the leader concentrates on employee compliance and quantity of outcomes using their legitimate and reward powers from positions given by the organization (Lussier & Achua, 2010; Tracey & Hinkin, 1996). This leadership style is generally based on bureaucratic authority within the organisation (Tracey & Hinkin, 1994).

According to Moore and Rudd (2006), transactional leaders exercise contingent reward and follow two forms of management-by-exception: passive and active. Contingent reward is the motivating scheme used by leaders to reward employee performance. Financial or psychological rewards are usually compensated when employee performance targets are achieved, whereas punishment is given to employees whose outcomes are dissatisfactory (Gill, 2011). As work motivation is based on price, employees' self-interests become tense (Bass & Avolio, 1993). On the one hand, passive management-by-exception argues that the intervening actions are taken by leaders to correct errors, but only if the followers have done something by mistake. On the other, active management-by-exception describes leaders as constantly monitoring followers' performances and simultaneously enforces rules and procedures to ensure organizational standards are met (Gill, 2011; Moore & Rudd, 2006).

However, Lowe, Kroeck and Sivasubramaniam (1996) argue that effective transactional leaders seem to thrive in an organization that is in a stable and predictable environment. Therefore, in dynamic and changing environments, adopting a new approach like transformational leadership might be appropriate. Transformational leadership emphasizes the shared vision of leaders and associates in the organization to achieve common goals (Zopiatis & Constanti, 2012). This style of leadership employed by leaders to influence followers comprises a set of behaviors, such as applying idealised influence, increasing motivation, encouraging creativity and innovation to inspire followers and making them feel as important assets of the organization (Felfe & Schyns, 2006).

According to Bass and Avolio's Transformational Leadership Model, leaders tend to apply one or more of the following four dimensions to transform their followers' beliefs (Humphrey, 2014). Firstly, individualized consideration is demonstrated by transformational leaders when they personally treat followers attentively, such as, for example, acting like a mentor, providing opportunities to learn in a supportive climate and identifying personal concerns and needs. Still, the leader should realize that different approaches should be adjusted in dealing with different people (Moore & Rudd, 2006). Secondly, intellectual stimulation is used by leaders when they want to encourage followers' imagination and creativity. By asking challenging questions, followers are engaged to carry out problem solving. Transformational leader roles reframe problems to find creative solutions (Gill, 2011). Thirdly, inspirational motivation is used when leaders want to increase team spirit and enthusiasm.

A clear communication of organizational vision is shared across the organisation to provide meaning and challenge in the work. Transformational leaders inspire followers by generating acceptance in which their personal goals can be achieved by attaining organizational goals (Bass, 1995). Finally, idealized influence is displayed by leaders who serve as role models in demonstrating skills, confidence and high standards of moral behavior to lead the organisation (Gill, 2011). As a consequence of emphasising accomplishment, transformational leaders gain trust, admiration and respect from their followers (Moore & Rudd, 2006). Nevertheless, the transformational leadership style has been criticized for the leader's potential abuse of power (Hall, Johnson, Wysocki, & Kepner, 2008). Followers' trust and value about the organization are formed due to the influence of their leaders (Stone, Russell, & Patterson, 2004).

- *Servant Leadership*

The concept of servant leadership has been a popular leadership philosophy for many years. Greenleaf (2002) defines servant leadership as "a model that identifies serving others, including employees, customers and community." (p.4). Trompenaars and Voerman (2010) argue that servant leadership emphasizes service to others but it can simply be the other way around, which is the leading servant. Prioritizing followers' interests, increasing service and sharing authority with others are key aspects of servant leadership (Humphrey, 2014). According to Russell and Stone (2002), the literature has identified more than 20 characteristics of servant leadership, including vision, honesty, trust, empowerment, service and pioneering. Page and Wong (2000) categorized those characteristics into four orientations as follows:

- *Character-orientation*. This personality component concerns the character of being a servant leader, such as having strong moral principle, servant attitude and humility. As moral responsibility is recognized as a characteristic of servant leaders, Walumbwa, Hartnell and Oke (2010) suggest that leaders should lead the organization toward success along with the success of their followers and other stakeholders.

- *People-orientation.* The relationship component focuses on leaders' relationship with followers and their commitment to develop, empower, and care for others.
- *Task-orientation.* This orientation concerns a leader's work, including skills and abilities, in order to successfully lead the organisation. Setting the organisation's vision and goals is part of this component.
- *Process-orientation.* This orientation cultivates the organizational system, for instance, team building, modelling and acquiring flexible and efficient organizational processes. (Dennis & Winston, 2003; Page & Wong, 2000)

De Waal and Sivo (2012) investigated whether servant leadership is relevant to high performance organizations (HPOs). HPOs are defined as organizations that have better financial and non-financial performances than their competitors for at least five years. Eight servant leadership dimensions were considered based on Nuijten (2009). Interestingly, the researchers found that five out of the eight attributes of servant leadership, (i.e. empowerment, stewardship, humility, forgiveness and standing back) were significantly related to HPOs. Even though authenticity, courage and accountability were not highly related to HPOs, at the very least, several of the dimensions were.

Therefore, servant leadership is related to the high-performance characteristics of organizational management. The principle of servant leadership (i.e. leaders willingly support and give followers their authorities to manage the responsible areas) is becoming the next step in hospitality leadership evolution. The model of servant leadership is based on the values of service, which is considerably associated with the hospitality industry. Thus, hospitality mentors must gradually implant the servant leadership concept to the young hospitality industrialists for them to become effective servant leaders in the future (Brownell, 2010).

- Similarities and Differences between Transformational and Servant Leadership

According to Stone et al. (2004), the characteristics of transformational and servant leadership are comparably related. Both concepts concentrate on people-orientation, which incorporates a common leadership framework, such as vision, work delegation, trust, integrity, modelling and influence. Transformational and servant leaders emphasise mentoring, listening and empowering their followers. Individualised consideration seems to be the most similar component in these two leadership approaches. Russell and Stone (2002) argued that whilst transformational and servant leaders are influential, servant leaders gain control and power over their followers in a distinctive way from the condition of being a servant.

Thus, in the servant leadership paradigm, service to followers is greatly emphasised. Stone et al. (2004) suggested that transformational leaders tend to have more concerns in supporting and engaging followers to achieve organizational goals than servant leaders. As a result, the distinguishing aspect in defining whether a leader is a transformational or servant leader is the degree to which he/she wants to convey his/her primary focus of leadership to the followers.

Cardona (2000) stated that each leader has different foci depending on the leadership orientation he/she possesses. Transformational leaders do not concentrate on an economically-based exchange relationship like transactional leaders, but create a work-based exchange relationship as well as build follower's commitment toward organizational vision and missions. As the primary focus is on the organization, the employees' development and empowerment form the supporting mechanism to achieving the organizational objectives (Stone et al., 2004).

Thus, achieving the company goals results in improving follower's performance as well (Bass, 1995). On the contrary, servant leaders focus on their followers and value the ones who constitute the organization. Russell and Stone (2002) claimed that outcomes are not the key focus of servant leaders but the service itself. Joseph and Winston (2005) revealed that strong relationships between servant leaders and people within the organization help establish organizational trust. As a consequence, those relationships will take priority over task and product. Even though the primary concentration of servant leaders is not on organizational objectives, the leaders believe their co-workers have the best interest of their responsibilities in the organization (Stone et al., 2004).

- Leadership in the Hospitality Industry

According to El Masry, Kattara and El Demerdash (2004), the success of any hospitality organization requires efficient human resources operations that can move the organization toward achieving its goals. As the hospitality industry is considered a labor-intensive industry, organizational performance tends to rely on employees. Kozak and Uca (2008) reported that most hospitality leaders employ change- and human-orientation as well as flexible management style to increase organizational success rate. These leaders tend to focus on democratic, coaching and participative approaches to build positive relationships with followers, improve working climate and develop service performance. Therefore, the leader's flexibility in adopting various styles of leadership in different situations and his/her ability to build and maintain good relationships with employees are necessary in leading hospitality organizations (El Masry et al., 2004; Kozak & Uca, 2008; Worsfold, 1989).

Hinkin (2011) argued that effective hospitality leaders must be able to understand the dynamics within and amongst organizations as such an understanding can help nurture important interdependent relationships in the organizations. Considering the overview of hospitality leadership, people-orientation is perceived as a primary factor in leading hospitality organizations. Relating this component to the two leadership theories discussed earlier, transformational and servant leadership reveal several basic similarities, including their humanistic orientation. Even though several points are significantly different, these principles are still complementary (Stone et al., 2004).

Transformational and servant leaders can bring change in the organization. Followers may become leaders themselves when they recognize that their leaders truly follow the concept of servant leadership. Hospitality organizations eventually benefit from such a change, especially when they gain long-term profitability and success. Generally, transformational and servant leadership offer effective models for contemporary leadership in managing hospitality firms (Stone et al., 2004).

3. Methodology

A comparative analysis was conducted on the leadership styles of two leaders of international hotel companies; Banyan Tree Hotels and Resorts and Millennium Hotels and Resorts. The study employed a qualitative research method by conducting a biographical narrative approach. In response to the central research questions of this study (i.e. 'What leadership styles should the hotel business leaders adopt to manage their organisations in a fast-changing business environment?' and 'Do successful ASEAN hotel business leaders implement the same or different styles of leadership?'), the methodology adopted in the research involved secondary data. This type of data was used due to time constraints in conducting field work and monetary limitations. According to Creswell (2012), "a biography is a form of narrative study in which the researcher writes and records the experiences of another person's life" (p. 504) and is normally constructed from records and archives.

As Veal (2011) suggested, secondary data are instantly available and can be reused in research. Walliman (2011) claimed that secondary data are reliable because they are produced from previous researchers or accredited writers. Accordingly, this study mainly used secondary data obtained from published written materials, academic articles, newspapers, books, magazines, industry reports and company documents. After collecting data, the content analysis technique was used to analyze the data. As defined by Elo et al. (2014), content analysis is a data analytical technique that represents a systematic interpretation of data involving preparation, organization and reporting of results.

4. Findings

The aim of this study is to compare the leadership styles of two ASEAN executives at the helm of two international hotel groups; Kwon Ping Ho, Founder and Executive Chairman of Banyan Tree Hotels and Resorts, and Kwek Leng Beng, Chairman of Millennium Hotels and Resorts. Table 1 summarizes the backgrounds of these two business leaders.

Table 1: Comparison of the Leaders' Backgrounds

Profiles/Leaders	Kwon Ping Ho	Kwek Leng Beng
Date of Birth	24/8/1952	1941
Age	67	78
Nationality	Singaporean	Singaporean
Education	Economics, National University of Singapore	Laws, University of London
	Honourable D.B.A., Johnson & Wales University Honourable Doctoral Degree, The Hong Kong Polytechnic University	Honourable D.B.A, Johnson & Wales University Honourable Doctorate, Oxford Brookes University
Managed Hotels and Resorts	41 properties in 24 countries	136 properties in 27 countries

Kwon Ping Ho's Background

Kwon Ping Ho is a Singaporean businessman. He was born on 24 August 1952 in Hong Kong and spent his childhood in Thailand, where his father was a former ambassador and entrepreneur. He holds a degree in Economics from the National University of Singapore and recently received an Honourable Doctorate of Business Administration in Hospitality Management from Johnson & Wales University. Mr. Ho started his career as a journalist and joined the family business in 1981. After spending more than 10 years managing the family business, Mr. Ho launched a luxury brand, Banyan Tree Hotels and Resorts, and has led the company since then (Ahmad, 2015). In 1994, Mr. Ho identified a gap in the industry that other international hotel chains could not fill. He believed a market segment existed but the prevailing marketplace could not fulfil such needs.

Thus, Mr. Ho saw potential in offering innovative and niche resort products to the market segment that wanted more than just private and luxurious accommodation. He created the Banyan Tree Brand in Phuket, which later became the company's flagship property. Banyan Tree Phuket offers accommodation products presented in a distinct individual villa style comprising local-inspired designs and romantic atmosphere. A few years after the establishment, Banyan Tree positioned itself in the upper-scale luxury resort (Roll, 2015; Wirtz, 2011). In 2002, after the success of the Phuket resort, Mr. Ho expanded his hotel business to Bangkok along with a spa outlet and retail shop, Banyan Tree Spa and Banyan Tree Gallery (Wirtz, 2011).

The brand later expanded to other major tourist cities in Asia, such as Samui, Bali and Macau, and in other areas, such as Africa and Central America. The success of the Banyan Tree Brand enabled brand extension. Angsana Hotels and Resorts was launched in 2000. The Angsana brand concentrates on leisure and business travellers who are looking for a trendy and lively holiday experience (Hospitality Net, 2011). In 2014, Banyan Tree unveiled a new brand, Cassia, which targeted middle-class travellers looking for holiday homes or fully-equipped serviced apartments. Currently, the Banyan Tree Hotels and Resorts brand operates over 37 hotels, 70 spas, 80 retail galleries and 3 golf courses spread throughout 28 countries. Many properties in the pipeline are under development (Roll, 2015).

Leadership Style and Its Impact on Hotel Performance

Kwon Ping Ho's foresight on turning an abandoned tin mine into an integrated resort complex (Laguna Resorts & Hotels, 2013) created a significant impact on the company. His long-term vision has made Banyan Tree a world-class luxury hotel brand providing a sense of Asian hospitality. Mr. Ho has led over 12,000 associates from 50 nationalities (Roll, 2015). Nonetheless, as Executive Chairman of the company, Mr. Ho is not difficult to approach. He is very humble even in his encounters with rank and file staff. As El Masry et al. (2004) stated, interpersonal aspect should be given more attention by hospitality leaders, and the personality component is one key leadership feature that moves a company toward success (Page & Wong, 2000).

Mr. Ho's caring personality has earned him the respect, praise and trust of Banyan Tree's staff. He has become a role model of a hospitality leader who demonstrates high standards of moral behavior. From this leadership practice, the staff gains confidence in the leader, who shows work dedication and loyalty in building the company's long-term profitability and success (Stone et al., 2004). Under Mr. Ho's leadership, Banyan Tree Hotels and Resorts has continued to perform very well in terms of revenue and profits. In 2017, the company earned 317.5 million US dollars in revenue, with a profit of 74.7 million (Banyan Tree Hotels and Resorts, 2018).

Kwek Leng Beng's Background

Kwek Leng Beng, who was born in 1941, is a Singaporean hotel and property tycoon. At 17, Mr. Kwek completed his internship at Hong Leong, his father's company. However, at that time he did not feel ready to inherit a home business. He studied at the Law School of the University of London, where he received a bachelor degree. After graduation, he acquired the business philosophy of his father, who instilled the company vision in him. In 1967, Mr. Kwek joined Hong Leong Finance as General Manager. Three years later, in 1970, he entered the hotel business and opened the first hotel, King's Hotel. Mr. Kwek then became the Managing Director of City Development Limited (CDL), a publicly-listed property company acquired by Hong Leong (Chua, 2015; Millennium & Copthorne Hotels Plc, 2015; Suryadinata, 2012).

In 1990, Mr. Kwek became the Executive Chairman of the Hong Leong Group and started acquiring hotels in the region. Four years later, valuable assets, such as the Millennium and the Macclowe, were bought at bargain prices in New York. In 1995, CDL acquired the Copthorne hotel chain, which helped raise the profile and reputation of the company. That same year, Millennium and Copthorne Hotels (M&C) joined with CDL's hotels and were listed in the London Stock Exchange (Chua, 2015; Suryadinata, 2012). Mr. Kwek led M&C to become a competitive hotel chain in the international hotel market. From a single hotel in 1970, M&C currently owns and manages over 120 hotels in 79 leisure and business destinations in Asia, Europe, the Middle East, North America and New Zealand.

Hotels and resorts under the M&C umbrella have expanded and are currently classified into three collections: Millennium, Copthorne and Leng's (Millennium & Copthorne Hotels Plc, 2015).

Leadership Style and Its Impact on Hotel Performance

Kwek Leng Beng came from a strong financial background as he ran Hong Leong Financial office before taking the position of Executive Chairman of the Hong Leong Group. His foresight and strong entrepreneurial spirit, instilled by his father, helped transform CDL into a well-known global hotel group. Currently, Mr. Kwek heads over 10,000 M&C staff and, combining all the activities of the Group, leads a staff of over 40,000 worldwide (Millennium & Copthorne Hotels Plc, 2015). Even though Mr. Kwek is said to be a demanding boss who is unafraid to challenge his management team if their performance is not satisfactory, his leadership style is very inspirational and decisive.

Once Mr. Kwek started working as a General Manager at Hong Leong Finance, he demonstrated strong entrepreneurial spirit by accommodating staff in his car for business dealing (Chua, 2015). Such practice proved he is an inspiring and motivating leader. Bass (1995) stated that inspirational motivation can be used to increase staff enthusiasm and push their performance toward achieving personal and company goals. Mr. Kwek quickly became a role model to his associates and a stimulating leader. In 2017, M&C Hotels under the leadership of Mr. Kwek showed outstanding performance. The company gained 1.008 billion pounds in revenue with a profit of 147 million (Millennium & Copthorne Hotels Plc, 2018).

Comparative Analysis of Leadership Styles

- Kwon Ping Ho

Kwon Ping Ho is known to be a visionary and an innovative leader with admirable moral qualities as attested by the launch of The Banyan Tree brand out of an abandoned tin mine into Asia's first integrated resort. Mr. Ho's explanation on how the brand was established is as follows: "There are only two advantages in life which are proprietary: technology and branding. Since I am not a technologist, I decided that whatever business I was going to do next had to have a strong brand." (Roll, 2015). Mr. Ho believes that Banyan Tree has sustainably maintained its competitive position in the market because of the strong branding focus. Even though the resort faced several crises, including the aftermath of 9/11, the Iraq War, and SARS, the company remained profitable as it managed to achieve its occupancy target. A clear emphasis was placed on brand identity, which was aligned with the concept of romantic escape and resort location (Roll, 2015). As Dennis and Winston (2003) argue, a task-oriented leader uses his/her skills and abilities to provide long-term vision and his/her vision will lead the organisation toward success. Mr. Ho did not only talk and think but he also acted to accomplish things from his visionary perspective.

Moreover, the company's objectives are clearly articulated throughout the organization. Mr. Ho creates a sense of brand ownership amongst employees by ensuring employee success is consistent with organizational success and objectives. He has been very generous with staff welfare. Evidently, the company provides good quality medical services, dining facilities and transportation for the staff. The staff dormitories are also well furnished. All these show much consideration for employees. Undoubtedly, these generous policies successfully pay off. As Mr. Ho was cited in Wirtz (2011): "The most gratifying response is the sense of ownership that our staff began to have. It's not a sense of financial ownership, but they actually care about the property." (p. 8).

This leadership practice is supported by the transformation construct, whereby common goals between leaders and followers can be achieved through organizational vision (Zopiatis & Constanti, 2012). When the process of how personal and organizational goals can be achieved is clearly communicated, employees are encouraged to work with increasing motivation (Humphrey, 2014). As a result of successful practice, the entrepreneurial spirit is instilled in the employee's mind. Empowerment is one key aspect to Mr. Ho's management philosophy. Although the standard of delivering five-star service is very high and strict rules are imposed in resort administration, the staff is still allowed to be creative and innovative. For instance, the housekeepers could design and decorate guestrooms in their own ways as long as these tasks are within the resort guidelines (Wirtz, 2011). As Mr. Ho mentioned in Milligan and Smith (2002): "We try to involve as many people as possible in the creative process – brainstorming, designing, redesigning and talking through what we want a particular project or new product, and the kind of standards we want to set." (p. 24).

The ways by which Mr. Ho leads his organization are fully supported by servant leadership concepts of being people-, character- and process-oriented. He has created a culture of servanthood. As stated by Walumbwa, Hartnell and Oke (2010), servant leaders do not only focus on engaging and developing employees in achieving company's objectives, like transformational leaders, they concentrate on moral dimensions and on the employees' interests and development.

- *Kwek Leng Beng*

In terms of leadership philosophy, Kwek Leng Beng is known to be a visionary and decisive hands-on leader. During an interview with CNBC's *Managing Asia*, Mr. Kwek was asked what leadership style he takes to drive M&C and Hong Leong Group. His answer was as follows:

I am a very hands-on person because I believe if you have to be hands-on, you need to understand what is the best strategy and policy you should have. Of course, because of the time constraint, you cannot be hands-on all the time in every aspect of the business. You only look at the more important aspects, such as sales and products. (Kwek, 2012).

Mr. Kwek tends to take an active form of management-by-exception, one of the concepts underlining transformational leadership (Gill, 2011). Still, he gives some freedom to his subordinates to manage their operations (Kwek, 2012). When in that same interview Mr. Kwek was asked how he is as Chairman of the company, he replied:

As a boss, I am demanding, but at the same time I am fair. I am outspoken. Some people like it and some people do not like it. I waste no time in trying to be talking sweet. I am very critical but if they know that, they can learn a lot from me and they will be very appreciative' (Kwek, 2012).

Apparently, Mr. Kwek is not a charismatic leader. This aspect of his leadership style tends to be supported by transactional constructs based on task completion and employee compliance (Tracey & Hinkin, 1994). Nonetheless, employees are treated fairly. This idea is consistent with contingent reward, that is, if employee performances are satisfactory, they are compensated but employees are punished if objectives are not achieved (Moore & Rudd, 2006). Mr. Kwek's management philosophy is very straightforward. He has the image of a decisive leader. If disagreements occur over his and company executives' management style, he is unafraid to change the management team (Chua, 2015). As he said to *The Guardian*, a British daily, when M&C went through a change of CEO, "We just said the style of management is different in terms of priorities, in terms of different ways of doing things. It's for our mutual benefit that we should part company' (Allen, 2007).

However, Mr. Kwek understands that people are one of the key aspects in running a hotel business and has therefore always shown appreciation of his employees as they play a significant role in implementing organizational strategies. In case his employees do not understand how to implement the strategy, he is willing to teach them (Kwek, 2012). As he mentioned when he received the TTG Travel Entrepreneur of the Year in 2014, “This honor would not have been possible without the support of many capable people who work with me as a team” (Today, 2014). This is in line with Kozlowski and Bell's (2003) findings.

Organizational success does not only rely on an individual but on a team. Team effectiveness is one important factor in driving an organization toward achieving goals. The acquisition of the Copthorne hotel chain in 1995 had a significant impact on CDL hotel management. It has transformed M&C into a well-established international hotel chain. Currently, M&C owns and operates over 120 hotels in 24 countries and is considered one of the largest hotel companies in the world (Shellum, 2015). Mr. Kwek's long-term vision has enabled M&C to achieve the company's goals together with the success of employees. Moreover, Mr. Kwek exhibits idealized influence, a core transformational leadership construct (Felfe & Schyns, 2006). His skills and high morality have made Mr. Kwek a company role model – one who embodies a sense of achievement amongst his followers.

5. Discussion

The central research questions of this study are as follows: 1) What leadership styles should the hotel business leaders adopt to manage their organizations in a fast-changing business environment? and 2) Do successful ASEAN hotel business leaders implement the same or different styles of leadership? Through an assessment of the leadership styles of the two ASEAN hotel business leaders, we found the following information based on the analysis of secondary data. Kwon Ping Ho and Kwek Leng Beng are Singaporean tycoons who specialise in hotel and resort development. Both have established international hotel chains. Even though the two leaders have different styles of leadership in managing organizations, they are both evidently effective and successful. Mr. Ho tends to have strong transformational and servant leadership characteristics, whilst Mr. Kwek tends to exhibit solid transactional and transformational leadership characteristics. However, the two share common leadership values in leading their organizations.

- *Entrepreneurial Leadership*: Considering the entrepreneur's perspective, Mr. Ho and Mr. Kwek demonstrate strong entrepreneurial leadership skills. Other than being successors of family-owned businesses, their strong entrepreneurial orientation significantly influenced organizational performance. Mr. Ho's willingness to take high risks can be seen from his willingness to make massive investments to turn abandoned land into a resort complex. Positive results from the investment led the Banyan Tree brand to quickly become a world-class luxury brand that provides a sense of Asian hospitality (Milligan & Smith, 2002).

Similarly, Mr. Kwek, whose decisive style of sealing deals and value investing, especially in the establishment of M&C, propelled the organisation to global recognition (Chua, 2015). His ambition in creating the first global hotel brand to come out of Asia challenged existing key players in the market. Even though competing with well-established American and European hotel chains was difficult, Mr. Kwek performed extraordinarily well (Doebele, 2001). As a result, M&C has now become one of the world's largest hotel management companies (Chua, 2015). Mr. Ho and Mr. Kwek are effective entrepreneurial leaders due to their practice of entrepreneurial spirit throughout their organizations. Consequently, their companies have shown sustainability in terms of performance, profits and employee loyalty. As stated by Muchiri and McMurray (2015), the stronger the entrepreneurial orientation business owners have, the healthier the ensuing business performance of the company.

- *Visionary Leadership*: Westley and Mintzberg (1989) have indicated that visionary leadership is emphasized on a process in which represented ideas are communicated in words and actions to effect organizational change. The visionary spirit of Mr. Ho and Mr. Kwek helped turn their respective companies into reputable international hotel brands. Pioneering in luxury resort products helped to establish the Banyan Tree brand, whilst the decisive style and meticulous eye for details took M&C to the global front. Interestingly, asset-based strategies are optimised by the two companies. As Mr. Kwek said to TTG Asia:

I use the rule of thumb that, in terms of income, one hotel you own equals 20 management contracts. The fee is based on percentage of turnover and GOP, but do you realise how many people and how much infrastructure you must have? If you have 10 good hotels, why would you want to manage other people's hotels and earn so little? So, our priority is our own hotels.' (Hamdi, 2014).

Similarly, the group revenues of Banyan Tree rely on hotel investment segments (Banyan Tree Holdings Limited, 2015), which means the asset-based approach is utilized for company's growth. The two leaders' strategic visions on business growth are in contrast to other major international hotel chains that normally earn money based on asset-light (Hamdi, 2014). In terms of human resources management, Mr. Ho and Mr. Kwek value people as the most important assets of the companies. Even though the two leaders employ different actions in managing their organizations, their commitments to lead the companies and employees toward achieving specific goals are clearly and effectively communicated throughout the workplaces (Banyan Tree Holdings Limited, 2015; Millennium & Copthorne Hotels Plc, 2015). Based on the overall accomplishment of Banyan Tree and M&C, one of the key success factors is the vision of the leaders. As Harper (2001) stated, the future of a company relies on the leader's skill and ability to craft vision. Hence, the leadership vision of these two ASEAN hotel business leaders can be observed and applied to other hospitality organizations.

6. Conclusion

Leadership style vary from one leader to another depending on the context of the core vision of the organization (Westley & Mintzberg, 1989). This study concentrated on two corporate ASEAN Executive Chairpersons, Kwon Ping Ho and Kwek Leng Beng, who have presented good qualities of leadership in the hotel industry. This study proved that leadership constructs, including servant, transactional and transformational leadership, are effective in managing hospitality organizations. Nonetheless, in many examples, the leaders adopted mixed styles of leadership in managing their organizations. Even though the transformational leadership style is argued to be more appropriate in managing dynamic changing environments (Lowe et al., 1996), this study revealed that transactional style of leadership is still effectively applicable in a changing and growing company. All these results depend on the situations that the leaders face and the organizational performance for the time being.

In summary, one leader may successfully apply one style of leadership in managing one organization, but that same leader may fail in applying that leadership style in another organization. Thus, the need of having a leader who possesses transactional, transformational, servant and other leadership styles greatly depend on the nature of the workforce and the distinct circumstances of each organization.

Limitations and Future Research

This research has a limitation that should be acknowledged. Due to the time constraint, secondary data were used in the analysis, which could be a disadvantage of this research. Further studies using a biographical narrative approach should employ qualitative or qualitative methods along with secondary data.

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Generalized Markov Method for Ranking Supplier Performance in the Herbal Industry: A Case Study of a Herbal Village in Thailand

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Abstract

The Thailand herbal market is expected to grow 10 percent a year, but it grew more than 30 percent in 2017. There are more than 11,861 acres of herbal farms, but this is not enough for the Thai herbal market. The government plans to promote supply chain, both upstream and downstream. This study measures the supplier performance of the households in Thapthim Siam 05 herbal community in Thapthim Siam 05 village which supplies Wang Namyen Hospital. Households have planted herbs and already received Good Agricultural Practices (GAP) certificates. Four supplier selection criteria were selected. They include cost, productivity are employed to evaluate and rank performances. The ranking is divided into three levels, which are excellent, good, and moderate. Performances at the excellent level can be further improved in order to receive a higher ranking in the future. Recommendations for each level of performance are also discussed., quality, and time. In addition, in-depth interview of suppliers were conducted and quantitative data collected. The Generalized Markov (GeM) method and the Power method

Keywords: Generalized Markov Method (GeM), Power method, Ranking, Supplier performances, Thapthim Siam.

1. Introduction

Today, a growing number of people concentrate on their health and wellbeing by using fewer chemical products and consuming organic and products, for instance, concoctions made from herbs. In Thailand, many people use herbs in their daily lives, be it in their food or as traditional treatments. The use of herbal products, however, is not only increasing in Thailand but also in many parts of the world. As reported by Tawichaphat, the chairman of the Thai herbal association and the director of Thai Health and Beauty Federation, in 2015, the exports of Thai dietary herbal supplements accounted for USD 11.43 billion; a 5 percent rise from 2014. Satisfying the domestic and international consumer demands generates massive revenue for Thailand. According to Choklumlert, the Rector of the Department of International Trade Promotion (DITP), Ministry of Commerce of Thailand, (2016), the global herbal supplements and remedies market is around USD 83 billion. This market is predicted to reach USD 110 billion by 2020, encouraged by a growing aging population and increasing consumer perception of general health and well-being.

In 2016, the Public Health Ministry announced that the Thai government had adopted a policy to develop Thai herbs in a systematic manner and on a sustainable basis so that Thai herbs would be grown with higher efficiency. The strategy outlined in the National Plan for Thai Herbal Development Volume 1 (2017-2022) aims to promote the production of Thai herbal plants in response to the market demand in Thailand and overseas and to make Thai herbs competitive in the international market. Among the measures adopted, specifications and criteria for land or areas for organic herb farms have been designed. This is meant to make herbal medicine in health services widely recognized and add economic value to them. The plan also establishes role models for medium-sized hospitals, which are to provide both physician and traditional Thai treatments.

There is, however, no study of herb farms supplying these community hospitals, a gap which this research study aims to bridge as it focuses on the herb farms that sell their products directly to such hospitals. More specifically, the farms involved in this research include herb farms supplying Wang Namyen Hospital, a community hospital selected as one of the eight pioneer role-model hospitals. Operating since 2010, this hospital provides traditional Thai treatments and Thai herbal products and manufactures the herbal products used as oils and drugs. The hospital distributes them to all government hospitals in Sa Kaeo. The hospital purchases the herbs directly from Thapthim Siam 05 herbal community. This enables the people in the community to have additional income from the herbs sold to the hospital. The herbal farm community does not use any harmful substances, such as insecticides and chemical fertilizers. The herbal farm are 1,600 square meters, and they can plant herbs freely.

Since there is to date no assessment of the performance of the households growing herbs in that community, the objective of this study is to evaluate household performances and develop a framework of ranking using the Generalized Markov (GeM) method. To do so, this research determines the critical factors for constructing a ranking model in order to rank the performance level of each participating household. Policy recommendations are proposed to improve the effectiveness of the supply chain performance. The assessment of upstream supply chains will help to improve productivity while maintaining the traditional benefits of each herb.

2. Literature Review

The literature review identifies criteria for measuring supply chain performance in SMEs and agricultural businesses.

2.1 Criteria Based on Supply Chain Performance Measurement

Performance strategy should be continuously improved by identifying contributing criteria for enterprises to consciously know their own competencies and weaknesses (Maarof & Mahnud, 2016). It is critical to understand the criteria of the enterprises in order to improve their performance and sustain their competitiveness (Banomyong & Supath, 2011). In addition, the primary market of dairy, food, brewery, pharmaceutical, chemical, and allied process industries should manage the upstream supply chains or focus on their raw material suppliers (Thakkar et al. 2009). As indicated by the relevant body of literature, the main factors that influence supply chain performance are time, cost, quality, production/productivity, technology and innovation, information, and reliability. Each factor is briefly discussed. The time criterion includes lead time (Lusine et al., 2007), which is a time interval for beginning and completing the production process. There is also the performance time of each process, to define the shortest manufacturing lead time (Huin et al., 2002; Chow et al., 2008) depending on the characteristics of the products or materials (Banomyong & Supath, 2011).

In the agricultural sector, the reduction of the processing time is essential in areas with several cropping seasons, where early crop establishment can contribute to higher yields for the following crop (Food and Agricultural Organization of the United Nations, 2018). Cost, another of the main criteria in business activity performance and processing evaluation, includes operational costs for controlling expenses and asset management (Banomyong & Supath, 2011) for cost control in the processes (Maarof & Mahmud, 2016) and in spending (Huin et al., 2002). Other expenses incurred include raw material cost, (Banaeian et al., 2015; Hassan et al., 2014), machinery/equipment cost, inspection/quality checking cost, maintenance cost (Anuar & Yusuff, 2011), transportation cost, and inventory cost (Anuar & Yusuff, 2011). In agriculture, operational costs chiefly consist of seeds, fertilizers, sprays, sundries, and labor cost (Caskie, 2017).

It is also essential to control the quality of the product (Banaeian et al., 2015). Service quality and product quality should be quality criteria (Takkar et al., 2009) in order to regain the capabilities of a process and get better quality (Quayle 2003). A quality inspection may include procedural inspection and final inspection testing and procedure for handling, storage, and packaging (Anuar & Yusuff, 2011). Therefore, quality control measures must ensure that food products meet certain safety and quality standards and play a key role in agricultural processing (Saak, 2016). Quality can be measured based on either intrinsic or extrinsic indicators. Intrinsic indicators include: flavor, texture, appearance, shelf life, and nutritional value (Mutonyi & Gyau, 2013; Aramyan et al., 2006).

In the Thai agricultural industry, quality is guaranteed by the Good Agricultural Practice (GAP) (Peni, 2018). Monitored by the National Bureau of Agricultural Commodity and Food Standard of Thailand, the GAP contains 8 principles for agricultural procedures: (i) no hazardous contamination water resources; (ii) no hazardous contamination in agricultural sites/crops; (iii) farmers/practitioners must have knowledge of agrochemicals use, (iv) follow a cultivation process and pre-harvest practices for ensuring specified agricultural product standard; (v) harvesting methods and post-harvest practices must not affect the product quality and must not contain contamination which affects consumer safety; (vi) sites are hygienically and products are transported to storage for protecting the quality of products from hazards affecting consumer safety; (vii) farmers/practitioners are trained to perform procedures correctly and hygienically; and (viii) data are recorded to evaluate and identify the resources, use of agricultural hazardous substances, agricultural procedures, and information of merchandisers.

Productivity is a good indicator of the land conditions, since it directly reflects changes in the quality and limitations of the land. Sustained productivity goes hand in hand with good management practices (Food and Agricultural Organization of the United Nations, 2018). Therefore, the performance of productivity should be identified at a high level due to the limited resource (Thakkar et al., 2009; Hudson et al., 2001). Crop yields are the harvested production per unit of harvested area for crop products. The farm size can be small, medium, and large with more than 100 hectares, between 100 and 200 hectares, and more than 200 hectares, respectively (Taylor & Grieken, 2015).

Most small enterprises use limited and old technology, and few manufacturers have modern equipment (Hassan et al., 2014). Innovation and learning measures should be introduced for resolving obstacles and identifying processes and problems (Souse et al., 2006). Technology and innovation in agribusiness can combine human resources and knowledge of technology and innovation, to develop farms that adapt to future changes and increase performance (Lee & Nuthall, 2015).

The sharing of information between a producer and a supplier can help in the planning of the production processes and benefit both harmoniously (Maarof and Mahmud, 2016; Chow et al., 2008). Information criteria thus involve developing a close relationship with customers. (Maarof and Mahmud, 2016). Knowledge resources are especially critical for a supplier. Exchanging information between a purchaser and a supplier can motivate them to learn new knowledge. This can also reduce perceived risk by sharing goals and values for short and long-term commitments (Lee & Nithall, 2015).

The reliability criteria should be evaluated for improving an SMEs' performance (Banomyong & Supath, 2011). This includes, for instance, the reliability of delivery (Moon et al., 2014; Chow et al., 2008). Delivering products on-time is essential in the agricultural industry (Maarof & Mahmud, 2016).

A summary of these criteria is shown in Table 1. Although the number of criteria discussed is higher, only four will be selected for this study as they account for 75 percent of the frequency analysis. They include time, cost, quality, and productivity. The reason technology and innovation were not selected is because they are minimally used in herbal farms.

Table 1: Summary of Reviewed Criteria

No	Year	Author	Time	Cost	Quality	Production	Technology/ Innovation	Information	Reliability	SME Manufacturing	Agricultural Business/ Industry
1	2018	Amegnaglo		*	*	*					*
2	2017	Lethra et al.	*	*	*	*	*				*
3	2016	Maarof & Mahmud	*	*			*			*	
4	2015	Lee & Nuthall			*		*	*			*
5	2015	Banaeiam et al.	*	*	*		*				*
6	2014	Hussan et al.	*	*	*		*			*	
7	2014	Moon et al.	*	*	*	*	*	*		*	
8	2013	Michael et al.	*	*	*	*				*	
9	2013	Mutonyi & Gyau			*	*		*			*
10	2011	Banomyong & Supath	*	*		*			*	*	
11	2011	Anuar & Yusuff	*	*	*	*	*	*		*	
12	2009	Thakkar et al.	*	*	*	*	*			*	
13	2008	Chows et al.	*	*		*		*	*	*	
14	2007	Bhawat & Sharma	*	*	*	*	*	*		*	
15	2007	Lusine et al.	*	*	*	*			*		*
16	2006	Sousa et al.	*		*	*	*			*	
17	2003	Quayle	*	*	*	*				*	
18	2002	Huin et al.	*	*	*	*		*		*	
Count			15	15	15	14	10	7	3	12	6
Percent (%)			19	19	19	18	13	9	4		
Cumulative Percent (%)			19	38	57	75	87	96	100		

2.2 The Generalized Markov (GeM) Method

The ranking of an object is its relative importance compared to other objects in a finite set of size n . For instance, for any two items, the first item is either ranked higher than, lower than, or equal to the second item. Ranking models have been applied for a long time. Ranking models produce ratings, rankings or arranging of the objects from a given scenario. The ratings can be calculated from selected criteria. The use of mathematical methods to develop rankings of supplier selection is indeed not a new idea. There have been many models for predicting the ranking of suppliers. A general approach to develop a mathematical ranking method is to create a matrix with entries that are determined by the results of criteria for each supplier. This study introduces a method that can be utilized for predicting the ranking of the herbal supplier selection. It also uses the GeM method, which is similar to the PageRank algorithm. The PageRank algorithm was developed by Brin and Page in 1998. PageRank produces a rating score for each of the identified web pages on the World Wide Web (www).

These rating scores are then used to rank the web pages. The algorithm is based on the elegant theory of graphs and the theory of GeM method (Mayer, 2000). The concept of PageRank is as follows. The initial step is to represent the www using a directed graph where web pages are the nodes and hyperlinks between the web pages the directed edges. Each directed link represents a hyperlink from one web page to another. An adjacency matrix of order n , A , is formed to summarize the web graph structure as:

$$A_{ij} = \begin{cases} 1 & \text{if here exists a link from node } i \text{ to node } j \\ 0 & \text{otherwise,} \end{cases}$$

where n is a number of web pages. After that, the normalized hyperlink matrix, H , is constructed as:

$$H_{ij} = \begin{cases} 1/r_i & \text{if here exists a link from node } i \text{ to node } j \\ 0 & \text{otherwise,} \end{cases}$$

where r_i is the i^{th} row sum of adjacency matrix A .

For the dangling nodes (a page that has no link), the H matrix is not a stochastic matrix. Brin and Page (1998) proposed a way to fix the row of zeros in H by replacing the normalized row vector that each element is set to (Langville & Meyer, 2011). This procedure is equivalent to adding directed edges, each with a weight, from node i to j and every other node in the directed web graph. After the modification of matrix H , a stochastic matrix S is determined. A non-negative matrix is stochastic if its row sums are equal to 1. Assuming e is a column vector of all ones and a a column vector such that a_i is zero if row i of A is nonzero and a_i is 1 otherwise, the matrix S can then be expressed as:

$$S = H + \frac{1}{n} a e^T \quad (1)$$

To use the concept of GeM and the theory of nonnegative matrices, it is necessary to form an irreducible matrix G . A non-negative matrix is called irreducible if and only if the corresponding directed graph is strongly connected. Using the rank 1 update and applying the convex combination to matrix S is the simplest way (it will still obtain all information of matrix S). The matrix G , the Google matrix, can be therefore be written as:

$$G = \alpha S + (1 - \alpha) e v^T \quad (2)$$

where v is a positive probability distribution vector and $0 < \alpha < 1$. Since G is a nonnegative irreducible matrix, the largest eigenvalue of G is 1, and there exists a unique positive corresponding left eigenvector π such that:

$$\pi^T = \pi^T G. \quad (3)$$

Thus, using the GeM method, the probability distribution vector for matrix G and the i^{th} entry is the rating score of the i^{th} webpage. Even though the size of matrix G is huge, it is primitive, which means G has only one dominant eigenvalue on the spectral radius (Meyer, 2001).

The Power Method is used to measure the largest eigenvalue and its corresponding eigenvector of G . The power method can be used to find the stationary vector of a Markov chain. The power method applied to G and the equation can be expressed in terms of the very sparse H :

$$\begin{aligned}\pi^{(k+1)T} &= \pi^{(k)T}G \\ \pi^{(k+1)T} &= \alpha\pi^{(k)T}S + (1-\alpha/n)\pi^{(k)T}ee^T \\ \pi^{(k+1)T} &= \alpha\pi^{(k)T}H + (\alpha\pi^{(k)T}a + 1-\alpha)e^T/n. \quad (4)\end{aligned}$$

Since it is an iterative method, the power method continues until some termination criterion is met. The traditional termination criterion for the power method is triggered when the residual is less than some predetermined tolerance, which is 10^{-16} , and the rate of convergence of the Power method on matrix G is affected by the value of α (Langville & Meyer, 2011).

3. Methodology

First, documentary research from literature surveys, journals, articles, and previous research works were analyzed for the selection of suppliers for small and medium enterprises (SME) performance. Data were collected from research published in credible international journals. Second, this research utilized a cluster sampling method by focusing on Thapthim Siam 05 herbal community. Data were collected from every household. In addition, in-depth interviews were conducted with all qualified farmers. The collected data from the interviews pertain to the related cost of production, inputs, and outputs for each household, the defect rate of outputs, and preprocessing time.

The instruments used in this study were a questionnaire survey and a topic of discussion for the in-depth interviews. Survey questionnaires were used to collect data from selected households that plant the herbs and have already received the Good Agricultural Practices (GAP) certificate at the selected period. The questionnaires for each household were divided into two parts as shown in Table 2. The questions addressed the performance-based outcomes by using obtained criteria affecting supplier selection. The first part covers some general information about each household and the second part information about the criteria.

Table 2: Study Questionnaire

Section	Question
General information	<ul style="list-style-type: none"> • Name of the household • Experience as measured by the number of years of planting herbs • Number of herb types currently grown at each house • Selling price of each herb • Total size of land used to grow herbs
Output	<ul style="list-style-type: none"> • Amount of planted herbs in kilograms • Yield of herbs in kilograms • Amount of herbs sold to the hospital in kilograms • Percentages number of herbs that pass the quality inspection
Cost	<ul style="list-style-type: none"> • Cost of land preparation, including labor and bio-fertilizer costs • Cost of cropping and planting the herbs • Cost of harvesting, including labor and transportation costs
Time	<ul style="list-style-type: none"> • Pre-processing (a period recorded in days for preparing each plot before planting the herbs). This period includes the rough plowing (for the first time) and the plowing in regular furrows (for the second time) in days

In addition, interviews were conducted with government officials at the hospital to obtain information on the demand side. The amount of purchased herbs from each household and their prices are recorded. The four criteria are shown in Table 3.

Table 3: Definition of Criteria

Criterion	Definition
Cost	The expenditure of the farmer from pre-processing to the post-processing; These costs include fertilizer cost, cropping cost, harvest cost, labor cost, transportation cost, and land preparation cost but exclude inspection cost since the primary inspection can be checked by the household without using extra equipment and additional labor.
Productivity	The crop yield is the harvested production per unit of harvested area for crop products as tons per hectare, used as the productivity in this study.
Quality	The percentage of primary inspection failure is checked by visual, taste and scent inspections before selling products to customers.
Time	This is the pre-processing time or land preparation time of the farm

Analysis of Generalized Markov (GeM) Method

After collecting the data, the GeM method is employed to classify each criterion and rank the overall performance of participating households. Table 4 shows the notation used to represent the model and equations of this study.

Table 4: Notation Used in this Research

Symbol	Description	Symbol	Description
n	Total number of households	i	Households in the matrix in horizontal
C	Cost matrix	j	Households in the matrix in vertical
P	Productivity matrix	c_{ij}	Cost for each household in matrix C
Q	Quality matrix	p_{ij}	Productivity for each household in matrix P
T	Time matrix	q_{ij}	Quality for each household in matrix Q
CS	Cost-stochastic matrix	t_{ij}	Time for each household in matrix T
PS	Productivity-stochastic matrix	α_c	Weight of cost
QS	Quality-stochastic matrix	α_p	Weight of productivity
TS	Time-stochastic matrix	α_q	Weight of quality
S	Statistic of household matrix	α_t	Weight of time
H	Herb household matrix	e	Column vector
		v	Transpose of vector e

The value of c_{ij} can be 3, 1, and 0 and is based on the three conditions. These are the cost of household i , which is less than household j ($c_i < c_j$); the cost of household i , which is equal to household j ($c_i = c_j$); and the cost of household i , which is greater than household j ($c_i > c_j$). c_i represents the value of each household cost (vertically) and c_j the value of each household cost (horizontally). In addition, the values of q_{ij} , and t_{ij} are also based on the same conditions as the value of c_{ij} .

The value of p_{ij} can be 3, 1, and 0 and is based on the three conditions. These include the productivity of household i , greater than household j ($p_i > p_j$); the productivity of household i , equal to household j ($p_i = p_j$); and the productivity of household i , less than household j . p_i represents the value of each household productivity (vertically) and p_j the value of each household productivity (horizontally).

The statistical data can be used to form the adjacency matrix A , which can be utilized to construct a nonnegative irreducible matrix H . Under the GeM theory, the matrix H ensures that there is only one left dominant eigenvector π^T corresponding to the largest eigenvalue (the entry π_i^T is the rating score of the household i in the matrix). The strength of the H matrix lies in its capacity to have several inputs at once. Several stochastic matrices can be built and summed into a convex combination, as in Equation (5):

$$S = \alpha_c CS + \alpha_p PS + \alpha_q QS + \alpha_t TS \quad (5)$$

where: CS is the stochastic matrix of cost, PS the stochastic matrix of productivity; QS the stochastic matrix of quality and TS the stochastic matrix of time. Since matrix S is the convex combination of the stochastic matrices, it is a stochastic matrix. The weight of each criterion is represented by α_c , α_p , α_q , and α_t and is usually calculated by the largest eigenvalue of matrices C , P , Q , and T , respectively. The herbal household Matrix H can be computed using Equation (6):

$$H = \alpha S + (1-\alpha) ev^T \quad (6)$$

In this equation, the personalization vector v is set to the vector e^T . As a result, vector v is a uniformly distributed row-vector.

The Power method is applied to matrix H by using the personalization vector v as the initial vector. The Power method creates a rating vector which is the stationary distribution vector for the herbal household matrix H . In addition, the termination criteria are set to 10^{-16} .

4. Results

Descriptive Statistics

Eight households in Thapthim Siam 05 herb community were willing to participate in this study. These households have already received the Good Agricultural Practices (GAP) certificate for the selected period. In addition, all the seeds were cost-free (paid by the government). The households planted different amounts of the various herbs depending on the herb garden size. The collected data are shown in Tables 5 and 6.

Table 5: Household Yields in USD

	Price per Kg	H1		H2		H3		H4		H5		H6		H7		H8	
		Kg	USD	Kg	USD	Kg	USD	Kg	USD	Kg	USD	Kg	USD	Kg	USD	Kg	USD
Rosella	0.20	490.00	98.00	-	-	125.00	25.00	345.00	69.00	-	-	1,694.50	338.80	-	-	140.00	28.00
Laurel Clockvine	0.71	26.00	18.57	-	-	-	-	-	-	95.00	67.86	-	-	9.00	6.43	20.50	14.63
Kaffir Lime	0.29	-	-	14.00	4.00	-	-	-	-	0.50	0.14	8.00	2.29	-	-	4.50	1.29
White Crane flower	0.13	-	-	37.00	5.29	-	-	20.00	2.86	-	-	18.00	2.57	-	-	-	-
Sea Holly	0.29	-	-	5.00	1.43	-	-	-	-	-	-	-	-	-	-	-	-
Turmeric	0.29	-	-	4,079.50	1,165.57	-	-	-	-	130.00	37.14	270.00	77.14	1,622.00	463.43	-	-
Cissus	0.20	-	-	-	-	784.00	156.80	-	-	-	-	-	-	-	-	165.00	31.80
Butterfly Pea	0.85	-	-	-	-	536.00	480.57	2.50	2.50	-	-	-	-	-	-	-	-
Candle Bush	0.29	-	-	-	-	50.00	14.29	-	-	-	-	17.00	10.57	-	-	22.50	6.43
Ngai Camphor Tree	0.29	-	-	-	-	25.00	11.14	-	-	11.00	3.29	93.50	26.71	-	-	-	-
Indian Gooseberry	0.57	-	-	-	-	91.00	52.00	-	-	-	-	-	-	-	-	-	-
Green Chirayta	0.43	-	-	-	-	154.00	67.43	149.00	63.86	-	-	-	-	-	-	-	-
Little Ironweed	0.29	-	-	-	-	-	-	-	-	1.00	0.29	-	-	-	-	-	-
Long Pepper	0.29	-	-	-	-	-	-	-	-	-	-	6.00	1.71	-	-	-	-
Total		516.00	116.57	4,135.50	1,176.29	1,765.00	807.23	517.50	138.22	237.50	108.71	2,101.00	459.80	1,631.00	469.86	352.50	82.14

Table 6: Collected Data for Each Criterion

	Household	H1	H2	H3	H4	H5	H6	H7	H8
C	Pre-processing (\$)	28.50	-	11.42	26.99	-	-	-	9.00
	Harvested (\$)	-	220.45	5.72	10.50	-	65.99	230.95	9.00
	Transportation (\$)	7.50	59.99	-	9.00	18.00	23.99	18.00	18.00
	Total Expenses (\$)	36.00	280.44	17.14	46.49	18.00	89.98	248.95	36.00
P	Yield (Tons)	0.52	4.14	1.77	0.52	0.24	2.10	1.63	0.35
	Crop area (Hectare)	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
	Productivity (Tons/Hectares)	3.23	25.85	11.03	3.23	1.48	13.13	10.19	2.20
Q	Quality inspection failure (%)	10.00	5.00	5.00	10.00	5.00	5.00	10.00	5.00
T	Pre-processing I (days)	30	30	15	30	30	30	30	30
	Pre-processing II (days)	12	13	13	14	13	13	15	12
	Total (days)	42	43	28	44	43	43	45	42

All households have the same herb plot size (1,600 square meters). The herb plots consist of sand and organic substances, which are suitable for planting herbs. Households grow herbs as seasonal crops and rotate the herbs every season in order to maintain the quality of their lands. They grow herbs without using any harmful chemical substances. As shown in Table 5, the fourteen herbs planted include: Rosella, Candle Bush, Cissus, Kaffir Lime, Laurel Clockvine, Turmeric, White Crane Flower, Sea Holly, Green Chirayta, Ngai Camphor Tree, Butterfly Pea, Little Ironweed, Indian Gooseberry, and Long Pepper.

Criteria

The criteria for each household were checked and previous data were used to construct an 8 by 8 adjacency matrix. Adjacency matrix *C* describes the score of each match. For instance, the match result between Household 1 and Household 4 is USD 36.00 and USD 46.49, respectively. Therefore, the number in the fourth row and the first column is three (Household 1 spends less money than Household 4).

$C =$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0	0	3	0	3	0	0	1
H2	3	0	3	3	3	3	3	3
H3	0	0	0	0	0	0	0	0
H4	3	0	3	0	3	0	0	3
H5	0	0	3	0	0	0	0	0
H6	3	0	3	3	3	0	0	3
H7	3	0	3	3	3	3	0	3
H8	1	0	3	0	3	0	0	0

Productivity matrix *P* describes the points for each household. The winner gains three points. If the result is equal, both households gain one point. The loser does not gain any point. The size of productivity matrix *P* is the same as adjacency matrix *C*, which is the 8 by 8 productivity matrix *P* as shown below. For instance, the match result between Household 1 and Household 4 is 3.23 and 3.23, respectively. Therefore, the number in the fourth row and the first column is three (Household 1 productivity value is higher than Household 4).

$P =$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0	3	3	1	0	3	3	0
H2	0	0	0	0	0	0	0	0
H3	0	3	0	0	0	3	0	0
H4	1	3	3	0	0	3	3	0
H5	3	3	3	3	0	3	3	3
H6	0	3	0	0	0	0	0	0
H7	0	3	3	0	0	3	0	0
H8	3	3	3	3	0	3	3	0

Quality matrix Q describes the points for each household. The winner gains three points. If the result is equal, both households gain one point. The loser does not gain any point. The size of quality matrix Q is the same as adjacency matrix C , which is 8 by 8. For instance, the match result between Household 1 and Household 4 is 10 percent and 10 percent, respectively. Therefore, the number in the fourth row and the first column is one. Quality inspection is at the same level in Household 1 and Household 4.

$$Q =$$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0	3	3	1	3	3	1	3
H2	0	0	1	0	1	1	0	1
H3	0	1	0	0	1	1	0	1
H4	1	3	3	0	3	3	1	3
H5	0	1	1	0	0	1	0	1
H6	0	1	1	0	1	0	0	1
H7	1	3	3	1	3	3	0	3
H8	0	1	1	0	1	1	0	0

Lastly, time matrix T describes the points for each household. The winner gains three points. If the result is equal, both households gain one point. The loser does not gain any point. The size of time matrix T is the same as adjacency matrix C , which is 8 by 8. For instance, the match result between household 1 and household 4 is 42 days and 44 days, respectively. Therefore, the number in the fourth row and the first column is three. The pre-processing time is the same in Household 1 and Household 4.

$$T =$$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0	0	3	0	0	0	0	1
H2	3	0	3	0	1	1	0	3
H3	0	0	0	0	0	0	0	0
H4	3	3	3	0	3	3	0	3
H5	3	1	3	0	0	1	0	3
H6	3	1	3	0	1	0	0	3
H7	3	3	3	3	3	3	0	3
H8	1	0	3	0	0	0	0	0

The largest eigenvalue of each criterion was calculated to find the weights of the four criteria by using the values of the four prior matrices. The results are 1, 1, 0.2500, and 0.500 for cost, productivity, quality, and time criteria, respectively. These weights were applied in order to find the appropriated weight for each criterion. The appropriate weights are 0.318, 0.318, 0.080, and 0.159, for cost, productivity, quality, and time criteria, respectively. Consequently, the herbal household matrix H can be defined as follows (7):

$$H = 0.125(1/8)ee^T + 0.318CS + 0.318PS + 0.080QS + 0.159TS \quad (7)$$

Herbal household matrix H is the probability matrix. Equation (1) from GeM method has been ignored since any row of adjacency matrix A does not contain all zeros (Carl, 2001). Moreover, the prior matrices are transformed into a stochastic matrix. The cost-statistic matrix CS , productivity-statistic matrix PS , quality-statistic matrix QS , and time-statistic matrix TS are shown below.

$CS =$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0.0000	0.0000	0.0000	0.0000	0.7500	0.0000	0.0000	0.2500
H2	0.1429	0.0000	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429
H3	0.2500	0.0000	0.0000	0.2500	0.2500	0.0000	0.0000	0.2500
H4	0.3333	0.0000	0.0000	0.0000	0.3333	0.0000	0.0000	0.3333
H5	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250
H6	0.2000	0.0000	0.2000	0.2000	0.2000	0.0000	0.0000	0.2000
H7	0.1667	0.0000	0.1667	0.1667	0.1667	0.1667	0.0000	0.1667
H8	0.5000	0.0000	0.0000	0.0000	0.5000	0.0000	0.0000	0.0000

$PS =$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0.0000	0.2308	0.2308	0.0769	0.0000	0.2308	0.2308	0.0000
H2	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250
H3	0.0000	0.5000	0.0000	0.0000	0.0000	0.5000	0.0000	0.0000
H4	0.0769	0.2308	0.2308	0.0000	0.0000	0.2308	0.2308	0.0000
H5	0.1429	0.1429	0.1429	0.1429	0.0000	0.1429	0.1429	0.1429
H6	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
H7	0.0000	0.3333	0.3333	0.0000	0.0000	0.3333	0.0000	0.0000
H8	0.1667	0.1667	0.1667	0.1667	0.0000	0.1667	0.1667	0.0000

$QS =$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0.0000	0.1765	0.1765	0.0588	0.1765	0.1765	0.0588	0.1765
H2	0.0000	0.0000	0.2500	0.0000	0.2500	0.2500	0.0000	0.2500
H3	0.0000	0.2500	0.0000	0.0000	0.2500	0.2500	0.0000	0.2500
H4	0.0588	0.1765	0.1765	0.0000	0.1765	0.1765	0.0588	0.1765
H5	0.0000	0.2500	0.2500	0.0000	0.0000	0.2500	0.0000	0.2500
H6	0.0000	0.2500	0.2500	0.0000	0.2500	0.0000	0.0000	0.2500
H7	0.0588	0.1765	0.1765	0.0588	0.1765	0.1765	0.0000	0.1765
H8	0.0000	0.2500	0.2500	0.0000	0.2500	0.2500	0.0000	0.0000

$TS =$

	H1	H2	H3	H4	H5	H6	H7	H8
H1	0.0000	0.0000	0.7500	0.0000	0.0000	0.0000	0.0000	0.2500
H2	0.2727	0.0000	0.2727	0.0000	0.0909	0.0909	0.0000	0.2727
H3	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250
H4	0.1667	0.1667	0.1667	0.0000	0.1667	0.1667	0.0000	0.1667
H5	0.2727	0.0909	0.2727	0.0000	0.0000	0.0909	0.0000	0.2727
H6	0.2727	0.0909	0.2727	0.0000	0.0909	0.0000	0.0000	0.2727
H7	0.1429	0.1429	0.1429	0.1429	0.1429	0.1429	0.0000	0.1429
H8	0.2500	0.0000	0.7500	0.0000	0.0000	0.0000	0.0000	0.0000

The experiments indicate that the rating scores for each household are steady after 235 iterations. Table 7 shows the household ranking from best to worst.

Table 7: Ranking of Households

Rank	Household	Rating
1st	H3	0.241388651509588
2nd	H5	0.212557556050539
3rd	H8	0.151137859361751
4th	H1	0.148490477051793
5th	H4	0.079822482216975
6th	H6	0.073688537529635
7th	H2	0.063445426597521
8th	H7	0.045555212809413

5. Discussion

This study empirically investigated herbal farm performance on GAP guaranteed farms. Its primary purpose was to identify appropriate criteria, evaluate household performances, and develop a framework of ranking using the GeM method. This study determined that the suitable performance criteria to evaluate the performance of herbal farms should be cost, productivity, time, and quality. The stochastic process obtained the largest eigenvalue, which is referred to as a weight for each criterion. Both cost and productivity received the highest value, which is 0.381. Therefore, they have the highest impact on the overall performance followed by time (0.159) and quality (0.080). The Power method was employed to analyze the rankings. The results indicate that the different rating scores (rounded to three decimal places) range from 0.045 to 0.241. The highest rating score is 0.241, which implies that this particular household has the most outstanding performance. For the gaps in rating scores (Table 8), two relatively large gaps are found (those highlighted). The overall performances can therefore be divided into three different levels: excellent, good, and moderate. Two households rank in the top level (excellent) with rating scores greater than 0.2.

Table 8: Rating Gaps for Each Household

Group	Rank	Household	Rating	Rating Gaps
Excellent Level	1st	H3	0.2414	
	2nd	H5	0.2126	0.0288
Good Level	3rd	H8	0.1511	0.0614
	4th	H1	0.1485	0.0026
Moderate Level	5th	H4	0.0798	0.0687
	6th	H6	0.0737	0.0061
	7th	H2	0.0634	0.0102
	8th	H7	0.0456	0.0179

Both Households 3 and 5 (H3 and H5) are able to control their processing cost as it is lower than in the other households. Even though the productivity criteria of the households are not excellent, the ability to keep the processing cost low can certainly have a substantial impact on their performances. As a result, if households focus on improving their productivity, they would receive a higher rating since productivity has the highest weight on the performance rating. Both H3 and H5 grow a variety of herbs. They enjoy a significant advantage as they can manage their harvesting period from different herbs. They can harvest a crop each month after the first four months and therefore have a steady income flow each month.

For the second tier (good level) performance, both H8 and H1 receive relatively similar rating scores. Their processing cost is double that of the first-ranked households. However, the productivity of H8 and H1 is better than that H5, which is ranked in the excellent group. As to H1, even though it has a higher productivity level than H8 and H5, it has one major quality control issue. The rejection rate of the output of H1 is 10%, higher than that of H8 (5%). Households in this group should focus on cost reduction as the top priority.

The performances of the remaining households (H4, H6, H2, and H7) point to the need for some improvements with regard to processing costs. The costs to these households are much higher than to all the others. Even though they grow more than one type of herbs, they are not able to harvest simultaneously.

6. Conclusion and Recommendations

The households that participated in this study are major suppliers of herbs to Wang Namyen Hospital. Each household has the same amount of crop area and can choose which herbs they plant in each season. Their annual performance is evaluated based on four different criteria (the rating scores or the largest eigen values are obtained through the Power method). The findings indicate that processing cost and productivity are two important criteria as the ability to keep costs low leads to more effectiveness. Timing and harvest management are also key factors for success. A household that chooses to grow a variety of herbs must be able to manage their harvesting times. Furthermore, selecting the right choice of herbs to grow leads to better harvesting and higher productivity as seen in Households 3 and 5.

Moreover, the irrigation system is important for reducing costs and increasing productivity. It is therefore essential to satisfy the water requirement of crops. Correctly irrigated crops offer the best yields. Conversely, if a plant does not receive sufficient water, the quality and quantity of the yield are impaired. Household 3, which has the best performance, takes advantage of this concept by using adequate irrigation equipment to control the amount of water discharged. This equipment is also economical for water use. Equally important, the irrigation system, which is connected directly from a public water source or a dam in the area, has allowed a shorter time for land or soil preparation.

Hence, improving the accessibility of public water source from a local dam is highly recommended for all households. Relying on only rainwater is not enough as drought is a common problem in the area. Since productivity can highly impact the performance, farmers should have access to quality seeds. Usually, these seeds are provided by the Department of Agricultural Extension, a local government agency. Research collaboration among agricultural and science experts should be supported by the government. Proper seed selections bring a higher quality of seeds; for instance, good quality seeds can grow faster, resist pest and diseases and be weather resistant. Good quality seeds ensure higher yields and lead to higher productivity.

A good knowledge of modern agriculture is recommended for farmers. Currently, they do not implement any of the new technological tools. Yet, technology can help farmers grow better crops while using fewer resources. Soil nutrients are the basic inputs for growing herbs. The right digital tools can help with soil health and fertility. The local agricultural agency has a great role to play as it can substantially contribute to better farming and equipment. New knowledge and technological skills sharing are recommended; in particular, nutrient data analysis, which should be emphasized. With the emerging of data science, research collaboration can assist in analyzing soil and making fertility decisions precisely.

This research, however, has limitations. Since it focuses on a particular crop area and technology, it may not be applicable to herbal farms in the entire country (Thailand). That said, the model developed and the criteria used can be applied to other studies.

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The Effect of Social Network on Small and Medium Enterprises' Export Mode Choice

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Abstract

Firms' resources, tangible and intangible, are critical for firms in formulating and developing domestic and international business strategies. Relative to Multinational Enterprises (MNEs), most Small and Medium Enterprises (SMEs) lack resources especially tangible resources. Thus, many SMEs rely more on intangible resources and among these personal networks and social media become critical in SMEs business strategy formulation. This study aims to examine the effect of social networks (personal network & social media) on Thai SMEs' export mode choice. Obtained from sample of 350 Thai SMEs in the manufacturing export sector, the logistic regression results indicate that personal networking in terms of getting acquaintance from government organizations and social media networking affect the export mode choice. The more SMEs can employ networks based on acquaintance from government organizations, the more SMEs apply the direct export mode. It is also found that the higher the level of SME social media usage in terms of getting export in target countries and creating brand awareness through social media networking, the more SMEs choose the direct export mode. Thus, SMEs' intangible network resources have a significant effect on their international expansion strategy formulation.

Keywords: SMEs, personal network, social network, social media, export mode choice.

1. Introduction

The advancement in information technology (IT) and communication infrastructures such as internet, e-commerce and smart mobile phones help people around the world connect with one another more easily (Muhammad, Char, Yasoja & Hassan, 2010; Etemad-Sajadi & Bezencon, 2012). It also changes the form of business from traditional brick and mortar to modern e-commerce (Vuori, 2012; Dahnail, Marzuki, Langgat & Fabeil, 2014). Along with the advancement of e-commerce, social media plays an important role for Small and Medium Enterprises (SMEs) exporting. This essentially has to do with network and relationship marketing (Lu & Julian, 2007). The potential capacity of social media, however, is not just about connectivity among people through websites and e-commerce, but also about enhancing the connectivity among businesses in real time.

Resources, tangible and intangible, are critical for firms in formulating and developing domestic and international business strategies. Relative to Multinational Enterprises (MNEs), most SMEs lack resources, especially tangible ones. As a result, many SMEs rely more on intangible resources. Personal networks and social media become critical to their business strategy formulation. Falahat, Mohamad and Migin (2013) found that when firms' resources are limited and constrained, networking is extremely useful. In their view, one of the key factors driving born global firms to global marketplaces is the possession of international contacts, which they refer to as networking.

Similar studies found that the use of networks is critical to SMEs internationalization (Baldo & Aureli, 2012; Ciravegna, Majano & Zhan, 2014). In the same vein, Jeong (2016) and Narooz and Child (2017) also concluded that networking plays a key role in reducing the limitation of SMEs in the internationalization process especially in selecting an entry mode. Moreover, Child and Hsieh (2014) and Faroque, Morris & Ferdous (2017) determined that networking supports a firm's decision-making process by providing it with ability to access the necessary information, financial capital, and human resources. Firms can learn some techniques or obtain insight information from the network, which makes the firm's manager better understand the market and improves its export performance (Faroque et al., 2017). As Alike et al. (2017) argues, networking can aid firms cope with institutional voids.

Some of the literature makes it quite patent that there is no doubt on the benefits from using networking in the internationalization process and on the international performance (Maltby, 2012; Oparacha, 2015; Vissak, Francioni, and Musso, 2017). Though entry mode decision is one of the important strategic decisions in the SME internationalization process, very few studies emphasize the importance of networking influence on the entrepreneur's decision making process (Child & Hsieh, 2014). According to Ciravegna et al. (2014), different types of network can aid the firm in seeking clients in new foreign market. The aim of this study is to investigate the effect of SMEs' personal networking and social media networking activities as intangible networking resources on their entry mode decision. More specifically, it seeks to determine the relationships between different types of personal and social networking activities on the choice of export as the entry mode.

2. Theoretical Basis

The resource-based view theory has been widely used in firms' internationalization literature. In addition, a majority of the literature on this issue pertains to MNEs. A firm's resources can be classified as tangible and intangible resources. In general, most MNEs are resource rich firms, whereas SMEs are the opposite with limited tangible resources. Thus, many SMEs rely more on intangible resources and, among them, networking becomes critical in SMEs' internationalization process. Though networking has been defined in several ways, this study defines networking as the interconnection that the key actors in a firm have with their contacts (Johanson & Vahlne, 2003; Islam, Keawchana & Yusuf, 2011; Surin & Wahab, 2013; Child & Hsieh, 2014). Networking can be classified as formal or informal (Islam et al., 2011; Baldo and Aureli, 2012; Salvador, Villenchenon & Rizzo, 2014; Falahat, Migin, Chuan & Kong, 2015). Formal networking refers to the relationship/networking between institutions, such as business centers and financial institutions (Salvador et al., 2014), and to the membership of industry associations (Child & Hsieh, 2014).

Informal networking on the other hand refers to social networks (Ojala, 2009; Child & Hsieh, 2014; Faroque, Morrish & Ferdous, 2017) or personal relationships between owners or authority person in an organization and their contacts (Zhou, Wu & Luo, 2007; Evers & Knight, 2008). Informal networks can be classified into two types; personal networks (Zhou et al., 2007; Durkin, McGown & Mckeown, 2013; Surin & Wahab, 2013; Musso & Francioni, 2015) and impersonal networks (Zhou et al., 2007; Durkin et al., 2013; Surin & Wahab, 2013). Personal networks can be suppliers, friends, alliances, family members (Zhou et al., 2007; Durkin et al., 2013; Surin & Wahab, 2013; Jeong, 2016), new clients responding to ads, new clients meeting at trade fairs, potential buyers contacted through an internet search for export, acquaintances from trade shows and fairs, and acquaintances from government organizations (Ciravegna et al., 2014; Jeong (2016).

Impersonal networks, such as social media, can be regarded as networks that can be used by entrepreneurs to enhance business through supporting, locating, creating, maintaining, and developing long term relationships with potential customers, suppliers and partners (Maltby, 2012; Dahnil et al., 2014; McCann & Barlow, 2015; Alarcon-del-Amo, Rialp, & Rialp, 2016; Fernandes, Belo & Castela, 2016; Wang, Pauleen & Zhang, 2016; Tajvidi & Karami, 2017). Several research studies on a firm's internationalization process use social media and social network interchangeably. Both social media and social network commonly represents the social network of company. Social media commonly refers to the virtual connection among people via the internet-based application such as Twitter and Facebook (Maltby, 2012; Khobzi and Teimourpour, 2014; Alarcon-del-Amo et al., 2016; Fernandes, Belo & Castela, 2016; Wang et al., 2016; Tajvidi & Karami, 2017). Prior literature presents several theories on networking such as the social network theory (Surin & Wahab, 2013), the media synchronicity theory (Wang et al., 2016), and the Resource based view theory (Alarcon-del-Amo et al., 2016).

In the networking theory, Surin and Wahab (2013) explained that networking is an interrelationship among people in an organization and their connection in the business world (Islam et al., 2011; Baldo and Aureli, 2012; Salvador et al., 2014; Falahat et al., 2015). As Wang, Pauleen and Zhang (2016) explained, social media as seen under the media synchronicity theory emphasizes the capability of social media in relation to business performance. Both the network theory and the media synchronicity theory explain the capability and benefits of personal network and social media towards business performance. As to the resource based view theory, it emphasizes the way firms use resources to determine a strategy and the capability to create sustainable, competitive advantages and superior performance (Alarcon-del-Amo, Rialp & Rialp, 2016; Chandra & Wilkinson, 2017). Different firms may have distinct management style regarding business relationships and social media usage. Tajvidi and Karami (2017) found that firms use resources such as the internal capacity of the firm (employee's skills, financial sources and relationships that the firm can control) to create firm's sustainable competitive advantage.

Interrelationship among people (personal networks), as expounded in the social networking theory, as well as the capability of social media to improve business performance, as advocated by the media synchronicity theory, can be considered as resources of a firm, since both can be controlled and managed by the firm. For this reason, the resource-based view theory remains the underpinning theory of this study. The internationalization theory is helpful to explain export mode choice. Johanson & Wiedersheim-Paul (1975), its two main proponents, have identified four different modes of entering an international market: Stage 1, no regular export activities (sporadic export); Stage 2, export via independent representatives (export modes); Stage 3, establishment of a foreign sales subsidiary; and Stage 4, foreign production/manufacturing units. Stage 1 has the lowest resource commitment in foreign country and the lowest level of risk and control over the foreign operations. On the other hand, stage 4 has the highest resource commitment with the highest risk and the highest level of control over foreign operations.

Given the different resource levels between SMEs and MNEs, exporting is the common entry mode choice (stage1 and stage2) in Thailand. There are two export mode choices; direct and indirect. When firms internationalize with their own resources without any intermediary, this is called direct export (Osland, Taylor & Zou, 2001; Hessels & Terjesen, 2010; El-gohary, Edwards, Eid & Huang, 2013). Conversely, when a firm exports products through intermediaries, this is referred to as indirect export mode (Osland, Taylor & Zou, 2001; Hessels & Terjesen, 2010; El-gohary et al., 2013). Technology advancement allows SMEs' consumer to access and exchange information about products and services with SMEs exporters directly (McCann & Barlow, 2015).

In addition, technology and infrastructure can reduce the geographical distance (Salvador et al., 2014; Serrano & Acero, 2015). Getting to know the product, brand name, direct ordering through social media can enhance SMEs export market reach without incurring a lot of searching cost in terms of physical communication and retailing costs. Previous literature focuses mostly on the relationship between personal networks and social media with business performance. O'keeffe, Gilmour and Simpson (2016) found that personal contacts and social media may have some effect on a firm's growth. A firm can increase its competitiveness by using a network's capacity. In the same vein, Jeong (2016) found a positive significant relationship between personal networking with clients and acquaintances from government organizations and financial performance. However, networks with family and friends are negatively associated with the financial performance of firms (Jeong, 2016).

Networking can help a firm receiving and updating information such as market knowledge (Ruzzier, Hisrich, & Antonic, 2006). The knowledge received from the network may affect the mode of entry in a firm's internationalization (Santos, Ferreira & Reis, 2012). There is a significant effect between networking, entry mode choice and market selection (Francioni, Musso & Cioppi, 2015). Serrano and Acero (2015) added that the internet might affect the propensity to export. It also influences the mode of export, whether direct and indirect, for SMEs. Ulrich, Boyd and Hollensen (2012) studied the relationship between personal networking and entry mode choice and found that there is significant relationship between personal network and intermediate mode. Although, some researchers have investigated networks relating to SMEs' internationalization process (Abdelmoety & Gounaris, 2015; Baldo & Aureli, 2012; Coviello and Munro, 1995; Zain and Ng, 2006), few have addressed how different types of personal networks may impact a firm's internationalization process in terms of entry mode choice. This study seeks to fill this gap in prior literature. The following hypotheses can be developed:

H1: There is positive relationship between using (H1a) family and friends (H1b) clients (H1c) potential customers from social media (H1d) acquaintances from trade shows (H1e) acquaintances from government organizations as network and SME direct entry mode choice.

Abdelmoety and Gounaris (2015), Baldo and Aureli (2012), Indari and Langenberg (2004), and Zhou et al. (2007) claim that social media enhances SMEs internationalization. SMEs, which are an essential sector of the national economy (Chelliah, Pandian, Sulaiman & Munusamy, 2010; Olawale & Garwe, 2010), adopt social media as a new channel in running a business both domestically and globally (Muhammad et al., 2010; Vuori, 2012; Dahnil et al., 2014; Salvador et al., 2014; Oztamur & Karakadilar, 2014; Ainin, Parveen, Moghavvemi, Jaafar & Shuib, 2015; McCann & Barlow, 2015).

Lu & Julian (2007) also found that social media plays an important role in SMEs' export. With the help of the social media, SMEs can leapfrog the traditional international entry process. Since it is of interest to understand how social media affect the entry process of SMEs, the following hypothesis has been developed:

H2. There is positive relationship between social media usage for (H2a) export, (H2b) creating new market channels and (H2c) creating brand awareness, and SME direct entry mode choice.

3. Methodology

This research study uses a quantitative methodology to examine the effects of personal networks and social media on SMEs export mode choice. The samples were drawn from a list from the Department of Trade and Promotion (DITP), Thailand. Convenience, judgmental and

snowball sampling methods were used to collect the data. A total of 15,683 firms in the manufacturing sector are registered with the DITP. According to Hair Jr. et al. (2014), the sample size of the logistic regression should be calculated from 10 observations per estimated parameter. Since 35 parameters are considered in this study, a sample of 350 is used. The questionnaire contained screening questions, five-point Likert scale questions, and dichotomous and multiple-choice questions. One screening question is about the export experience of respondents and is meant to ensure that the respondents are exporters and have the authority to make decisions selecting an entry mode. Another screening question is to confirm the size of the firm, which must be an SME. In this study, a firm with no more than two hundred employees is considered to a SME.

For the measurement items, five-point Likert scale questions (ranging from 1 = least used to 5 = most used) are used for each type of personal networks and social media. Personal networks questions enquire about the degree of usage of personal networks in each type. The questions regarding social media pertain to the level of social media used for export, the use of social media as new marketing channel and the use of social media in creating brand awareness in target countries. Personal networks and social media questions have been adopted from Jeong (2016), and Alarcon-del-Amo et al. (2016) respectively. As to the dependent variable (entry mode choice), the respondents were asked to choose from dichotomous choices whether they use a direct or an indirect export mode. The direct export mode choice is encoded as 1 and the indirect one as 0. Logistic regression was used to analyze the data.

4. Results

The results from the 350 data sets (175 sets per mode choice) were interpreted based on the -2 Log likelihood, HL P-value (the Hosmer & Lemeshow test), the Omnibus test of model coefficients (χ^2), and the classification of model. The following is the equation to estimate the SMEs export mode choice:

Equation 1.1

$$P(\text{Indirect export mode}) = \frac{1}{1 + e^{-Z}}$$

Equation 1.2

$$P(\text{Direct export mode choice}) = 1 - P(\text{Indirect export mode})$$

Where P = Probability of selecting export mode choice

$$Z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_8 X_8$$

Where X_1 =Personal network with friends and family, X_2 =Personal network with clients, X_3 =Personal network with potential customers from social media, X_4 =Acquaintances from trade shows, X_5 =Acquaintances from government organizations, X_6 =Level of use of social media for export to target countries, X_7 =Level of use of social media in creating new market channels, X_8 =Level of use of social media in creating brand awareness.

Table 1: Logistic Regression Results for Each Type of Personal Network and Social Media

Dependent Variable: Export Mode Choice	Model 1
Personal network with friends and family	.352
Personal network with customers	.246
Personal network with potential customers from social media	-.086
Acquaintances from trade shows	.437
Acquaintances from government organizations	-1.450**
Level of use of social media for export to target country	-.645*
Level of use of social media in creating new market channels	0.079
Level of use of social media in creating brand awareness	-.875*
Constant (β_0)	7.754
-2 Log Likelihood (-2LL)	382.811
Nagelkerke R^2	.338
Hosmer & Lemeshow Test ($HL\chi^2$)	13.834
Omnibus Tests of model coefficients (χ^2)	102.392**
Correct classification (%)	73.1

*significance at p-value less than .05

**significance at p-value less than .01

As can be seen in Table 1, the results of the Omnibus Model test are highly significant at a p-value of less than 0.01 with a model Chi-square of 102.392. In addition, the model can correctly predict the export mode choice for 73.1 percent. The Hosmer and Lemeshow test show the results to be insignificant at a p-value of 3.834 (they are insignificant at a p-value higher than .05). This means that the model is suitable to predict the export mode choice of SMEs. Moreover, the Nagelkerke R^2 indicates that this model can explain the phenomenon for 33.8 percent. Therefore, the model of personal network and social media is suitable to predict SMEs' export mode choice.

As to hypothesis testing on personal network and entry mode choice, the statistic results of H1a, H1b, H1c, H1d and H1e show that only H1e (personal networks from acquaintances from government organizations) is supported with significant level at a p-value of less than 0.05. The coefficient of acquaintance from government organizations is -1.450. H2a (level of use of social media to export) and H2c (level of use of social media in creating brand awareness) are highly significance at p-value, which is less than 0.05. For H2b the level of use of social media in creating new market channels is not significant. The level of use of social media for export target countries and the level of use of social media in creating brand awareness have a coefficient value at -.645 and -.875 respectively.

Research findings indicate that there is a negative relationship between acquaintances from government organizations and indirect export mode choice. This can be interpreted as meaning that the higher the level of use of government organization acquaintances, the lower the propensity for SMEs to use the indirect export mode choice. In other words, the more familiar SMEs are with government organizations, the more likely they are to select direct export as an entry mode choice. When firms opt for the direct export mode choice, the cost of export is likely to diminish, leading SMEs to become more profitable. The findings in this study corroborate the determination made by Jeong (2016) that networking with clients and acquaintances from government organizations has a significance positive relationship to the financial performance of SMEs as they obtain the relevant information and knowledge that enable them to improve their financial performances.

Similarly, Narooz and Child (2017) concluded that when SMEs have networks with governmental institutions, they typically have a much higher chance of getting relevant and insightful information in support of their internationalization process. Moreover, insignificant relationships between export mode choice and networking with friends and family, clients, potential customer from social media and acquaintances from trade show have been found. These may be explained as followed. SME typically frequently interact with these actors. However, when SME entrepreneurs make a decision on the entry mode, the decision making usually comes from the SME entrepreneurs' own choices. The opinion of friends and family may be heard at the information gathering phase but generally not at the final decision-making stage.

The findings in this study are in line with those of Kujala and Tornroos (2018) who stated that the SMEs' internationalization success can occur due to the network capacity that each firm has. However, as they pointed out, friends and family networks commonly bear on entrepreneurs' decision making in terms of financial support and knowledge rather than on strategies to run the business. Similarly, Bertrand & Schoar (2006) argued that family members could be considered as human resources and also be part of the capital pooling device. This may imply that the final strategic decision making may not be fully dominated by family members. Regarding the relationship with clients, potential customers and acquaintances from trade shows, the research findings are in line with Narooz and Child (2017). Their research study determined that SMEs commonly rely on guidance and suggestions from professional export officers from government organizations such as, for example, Chambers of Commerce rather than from social ties in the form of business networks such as clients and customers.

In this case, the acquaintances from trade shows could be potential customers or potential partner and therefore have no relationship with the export mode decision-making process of SMEs. Vissak et al., (2017) conducted a qualitative research on the winery industry and found that networks from tourists and friends and relatives were not useful channels for starting export. According to their research, some respondents were displeased to use networks from acquaintances from trade fairs as they feel these may not create valuable contacts for firms and some of these networks may have personal issues such as pecuniary problems.

There is less evidence to confirm that networks from clients and potential acquaintances from trade fairs can provide competencies and capabilities related to strategic decisions regarding possibly entering international markets (Vissak et al., 2017). These types of networks do not therefore relate to the export mode choice of SMEs. Furthermore, regarding networking through social media and export mode choice it was found that there is a negative relationship between export mode choice and the level of use of social media to export and the level of use of social media to create brand awareness.

This can be interpreted as meaning that the higher the level of use of social media for export and creating brand awareness, the higher the propensity of SMEs to use less indirect export mode choice. When SMEs apply a higher degree of usage of social media for export, they tend to use the indirect export mode choice less. Moreover, SMEs commonly use social media to create brand awareness, which enhances their opportunity to meet both prospective customers and suppliers. These connections as well as communication can help SME entrepreneurs update information that may reduce their worries about the internationalization process. Thus, the higher the level of SME use of social media to create brand awareness, the lower the propensity for the SME to select the indirect export mode choice. Social media has been widely used in both the government sector and the private business sector.

Social media has been determined to reduce the psychic distance among countries around the world (Salvador et al., 2014; McCann and Barlow, 2015, and Serrano and Acero (2015). It enables people across the world to communicate easily. This explains why SME entrepreneurs use social media as a communication tool to make or receive order from far-away countries and promote firm/product and services to target markets rather than consider it as a new market channel. This is consistent with McCann and Barlow (2015) and Serrano and Acero's (2015) studies which showed that the diminishing difference among countries across the world is enhanced by social media. Social media reduces travelling and communication costs. In addition, social media encourages direct contact among target customers and sellers to order products and respond to inquiries.

Therefore, social media is one alternative way that allows exporters to obtain information about the target market. Social media also helps SME entrepreneurs have direct contacts with their customers. Moreover, the results also indicate that SMEs use social media to create brand awareness and for export activities. SMEs may not consider social media as a new market channel but it is clear that they see it as a tool for communication among exporters and their customers. This is corroborated by the relevant prior literature which highlights the benefits of social media as an instrument for communication (Salvador, Villechenon, & Rizzo, 2014; McCann & Barlow, 2015; Serrano & Acero, 2015). SMEs use social media as an instrument to create more benefits for firms by saving money and time as it reduces the cost of travelling. This could be one of its major benefits.

5. Conclusion and Recommendations

Using a sample of 350 SMEs in the manufacturing export sector, the logistic regression results indicate that the more SMEs apply direct export mode, the higher the level of use of personal networking by SMEs based on acquaintance from government organizations. The findings also indicate that the higher the level of SME social media usage in terms of getting export and raising brand awareness, the more likely SMEs are to choose the direct export mode. Thus, the intangible network resources of SMEs have a significant effect on their international expansion strategy formulation, especially in terms of entry mode choice. It thus can be concluded that social networks, both personal networks and social media network, have a direct relationship with the export entry mode choice. The higher the use of social network, the more Thai SMEs opt for the direct export mode.

One of the advantages of direct export entry mode is that when firms internationalize without intermediary hands they retain a high control over their foreign marketing activities, which can yield more insights over their own customers and lead to their long run sustainability (New Zealand Government, n.d.). Favoring the direct export mode can give SMEs more opportunities to meet new customers and help them develop new international markets at a lower cost.

As to the personal network dimension, getting acquainted with governmental organization especially through e-government applications can be as source of insightful information to SME entrepreneurs. It is thus recommended that in order to make more use of the direct entry mode, Thai SMEs get acquainted with government organizations. Moreover, social media can help SMEs reduce the effect of psychic distance between countries. SMEs can use social media as a communication instruments that connecting firms and clients as well. It is also therefore imperative that in order to develop the use of the direct entry mode, Thai SMEs engage in social media networking as part of their strategies targeting foreign markets and building brand awareness abroad.

Limitations and Recommendations

The questionnaires were distributed only to manufacturing SMEs in Thailand. Thus, cautions must be taken while applying the research findings of this study to the service sector. It is therefore recommended to replicate this study in service sector in future research. Moreover, the effect of employing social media in the export mode choice of SMEs on their export performance would also be an interesting topic for future studies.

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Determinants Factors Affecting the Competitiveness of Thai Ocean Freight Forwarders: An Application of the Confirmatory Factor Analysis

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Abstract

This research aims to study the factors affecting the competitiveness of Thai ocean freight forwarders. The samples for this study were 208 Thai ocean freight forwarders. The research instrument was a factor evaluation form designed to investigate the factors affecting the competitiveness of Thai ocean freight forwarders and test reliability (0.973). The content validity was assessed by experts, and the construct validity analyzed by conducting a confirmatory factor analysis (CFA) using the LISREL program. The model of factors affecting the competitiveness of Thai ocean freight forwarders was found to be consistent with the theoretical framework. The findings indicate that in order to increase their competitiveness potential, Thai ocean freight forwarders should focus on improving maritime logistics service quality, firm resources, and business networks.

Keywords: Confirmatory factor analysis, firm resource, business networks, maritime logistics service quality, and competitiveness

1. Introduction

World trading depends largely on maritime logistics. More than 90% of international trade is shipped through ports (Cho & Yang, 2011). Maritime logistics is suitable for goods shipped in great amounts because of the low cost per unit. This is also eco-friendly compared to other shipping methods (Li, 2011). Moreover, globalization has been increasing maritime trading rapidly and providing new opportunities for maritime logistics companies (Evangelista & Morvillo, 2000; Notteboom & Winkelmans, 2001). But globalization has also increased global competition among maritime logistics companies. This change in the global market structure and the needs of ocean freight forwarders has caused maritime logistics companies to revise their business plans to respond to ocean freight forwarders' demands. Ocean freight forwarders are an essential link in logistics management and the effectiveness of shippers to connect global maritime logistics networks (Notteboom & Winkelmans, 2001; Heaver, 2002; Cheung *et al.*, 2003).

According to Lu & Dinwoodie (2002), Burkovskis (2008) and Banomyong & Supatn (2011), ocean freight forwarders are not only responsible for maritime shipping, they are also responsible for facilitating exporters' business operations, including freight booking confirmation, loading goods, shipping, import declaration, export declaration, document management to name a few. Ocean freight forwarders are especially important to importers and exporters as they can reduce the cost for their business and provide them with door-to-door service (Chen *et al.*, 2009; Fremont, 2009). In Thailand, the number of ocean freight forwarders is increasing rapidly due to the steady growth of the export sectors (Kasikorn

Research Center, 2018). This has brought about strong competition among ocean freight forwarders and is affecting their operation plans. Ocean freight forwarders should therefore develop their competitiveness and provide more effective services to satisfy their customers (Lai, Ngai & Cheng, 2004). Moreover, they need to revise their business strategies to make their operations more effective to respond customer needs and gain competitive advantages.

This research aims to study the factors affecting the competitiveness of ocean freight forwarders in Thailand. It analyzes empirical evidence. The literature review includes competitiveness of ocean freight forwarders in Thailand and the various factors affecting their competitiveness. The relevant literature is reviewed in Section 2 and the research methodology presented in Section 3. The construct validity analysis using first order confirmatory and second order confirmatory factor analysis (CFA) is discussed in Section 4. The conclusion and various recommendations are contained in Sections 5 and 6, respectively.

2. Literature Review

The literature review includes the factors affecting the competitiveness of ocean freight forwarders, namely, firm resources, business networks, and maritime logistics service quality. This section first discusses the concept of competitiveness.

- Competitiveness

Micheal E. Porter (1985) articulated ways to gain competitive advantages. The core concept of the theory is that when a firm gains higher benefits than others in the same business group, that firm has the potential to compete in the market. The main aim of all businesses is thus to create sustainable competitiveness (Porter, 1985). Siudek & Zawojaska (2014) have categorized competitiveness into three levels; the nation, the industry, and firm levels. According to Hanson et al., (2001), the competitiveness of a firm is based on the strategic management of resources, capabilities and on its core competencies. Ambastha & Momaya (2004) studied firm competitiveness and concluded that it is linked to assets, process, and performance. 'Assets' refer to firm resources and 'process' to the process of activities and firm management. As to 'performance', it refers to the potential in production, the difference between price and cost, product variety, value effectiveness, and customer satisfaction. 'Performance' can be subdivided into financial performance and non-financial performance (Wilden et al., 2013; Yang et al., 2011).

- Firm Resources

Resources refer to anything valuable or beneficial to the firm's owner. Resources can be subdivided in various subgroups. Evered et al., (1980) have grouped resources into six main categories: (i) physical resources, (ii) human resources, (iii) technological resources, (iv) organization resources, (v) financial resources, and (vi) reputation. Wernerfelt (1984) also subdivided resources and grouped them into two categories; (i) tangible and (ii) intangible. Barney (1991) found that firm resources consisted of four categories, namely, (i) valuable resources, (ii) rare resources, (iii) imperfectly imitable resources, and (iv) nonsubstitutable resources. Barney et al., (2001) further identified the resources with which firms can gain advantages in competition. These consist of: (i) tangible assets, (ii) intangible assets, and (iii) organizational capital resources. Subsequently, Barney (2002) proposed another 4 firm resource categories; (i) financial capital, (ii) physical capital, (iii) human capital, and (iv) organizational capital.

- Business Networks

Wheelen & Hunger (2000) found that business networks help a firm focus on the outstanding potential together with gaining effectiveness from other firms in the network to enhance the firm potential. Jennings & Beaver (1997) reported that the successful firm was the one which can gain benefits from business networks for financial support, market access, and marketing

analysis. Getting involved in a business network is also considered to be the main point of success of small and medium enterprises (SMEs). Business networks can support SMEs to compete in global markets. Inoue & Liu (2015) found that business network can enhance their effectiveness and strengths. Moreover, information can be connected systematically within the network. This potential is likely to lead a firm to success. Hohenthal et al., (2015) mentioned that networking has a positive effect on business connections and results in business expansion at the national and international levels. Jarillo (2013) described business network strategy as a long term agreement between firms that are different but still connected.

Networks can make a firm gain more competitive advantages than outsiders and make it able to establish new markets to respond customer's needs. In addition, Moller (2013) showed that business connections were major business environmental factors for increasing value and enhancing capacities in sustainable competitiveness (Taticchi et al., 2012). The joint operations of business networks must be collaborative activities based on mutual trust and benefits (Zorlu & Hacıoğlu, 2012). Creating trust in business networks refers to situations where firms rely on one another, get awareness of mutual benefits, and treat others equally, honestly, and fairly. Moreover, it includes the way firms share valid and clear information with others with good governance (Sorensen et al., 2011). Co-cultural organizations consist of mutual values between firms and collaborative operations. The key factor that leads to success is the push from management and even staff to work together to generate innovation and integrate organization cultures (Hahn et al., 2015).

Another important construct is knowledge sharing, which refers to knowledge management between firms to enhance their potential, creativity and innovation. Knowledge sharing also involves knowledge transferring and experience sharing. Both enhance relationship through interactive activities between firms (Sanchez et al., 2013). Collaborative ideas can lead to innovation and further sustainable development (Johansson et al., 2013).

- Maritime Logistics Service Quality

Lu (2000) studied logistics services in Taiwanese maritime firms and investigated the effects of logistics services on the effectiveness of maritime shipping firms. The study identified eight strategies concerning logistics services: (i) quickness and reliability, (ii) additional service, (iii) agent service, (iv) integrated service and long term connection with national storage, (v) freight charge, (vi) facilities, (vii) firm image, and (viii) promotion. Lu & Dinwoodie (2002) looked at the perspectives of international freight forwarder services and determined that the key factors of logistics services consist of: (i) value added to the service, (ii) service support, (iii) goods distribution, (iv) information service, and (v) shipping service. These five factors can enhance the potential of logistics businesses. Focusing on carrier service and shipper's perspectives, Lu (2003) showed that exporters essentially need five types of service: (i) storage service, (ii) goods monitoring service, (iii) land shipping connection service, (iv) customs formalities service, and (v) document management service.

There is a strong correlation between maritime shipping and logistics activities. Liang et al., (2006) argue that four factors affect the abilities of maritime logistics service providers: (i) the ability of service response and comfortable operation, (ii) integrated services, (iii) shipping services, and (iv) price. These factors came from 22 indicators in the container shipping context. Thai (2008) studied service quality in maritime transport and concluded that the quality of the service was not solely based on customer behaviors awareness. Service providers have to respond to the needs of customers, including integrating technology into their process for better services. The indicators for service quality consist of on time service, competitive cost, and variety of services to respond customers.

The quality of service directly affects the financial health of firms (Clayton & Turner, 2000; Jenssen & Randoy, 2006; and Panayides, 2006). Banomyong & Supatn (2011) studied logistics providers and shippers' perspective and found that four factors affect customer's selection for receiving logistics services. These are (i) reliability, (ii) assurance, (iii) tangibility, (iv) empathy, (v) responsiveness, and (vi) service cost.

3. Research Model and Methodology

The body of literature discussed above indicates that key factors such as firm resource, business networks, maritime logistics service quality, competitiveness are closely related. In this study, these relationships will be verified by testing the following hypotheses:

H1: Firm resource has a direct positive relation to competitiveness.

H2: Business networks have a direct positive relation to competitiveness.

H3: Maritime logistics service quality has a direct positive relation to Competitiveness.

- Population and Samples

The population in this study was 368 Thai ocean freight forwarders (Thai international freight forwarders association, 2018; The customs broker and transportation association of Thailand, 2018). The sample in this study consists of 208 Thai ocean freight forwarders which were selected using the convenience sampling method.

- Research Instrument

The research instrument was an evaluation form designed to investigate the factors affecting the competitiveness of Thai ocean freight forwarders. The evaluation form included a Seven-Point Likert Scale evaluation form (with 1 = the lowest score and 7 = the highest score). Items of Congruence (IOC) were analyzed by 5 experts. The IOC index was between .60 - 1.00. The reliability was validated based on Cronbach's Alpha test as 0.973 is higher than 0.7 (Peterson & Kim, 2013).

- Data Collection

Data were collected from the 208 firms selected using the evaluation form developed by the researchers. The sample size was determined based on the ratio calculation of the number of samples per parameter or variables at 10:1 (Bentler & Chou, 1987; Kline, 2005; Worthington & Whittaker, 2006). Since there are 18 variables in this study; the appropriate number of samples was at least 180 samples (18 x 10). After the sampling selection, the objectives of the study were explained as was how to respond to the evaluation form. After the data were collected, they were coded and analyzed.

- Data Analysis

Data were analyzed by conducting a confirmatory factor analysis (CFA). A CFA analysis consists of a first order confirmatory and a second order confirmatory analysis designed to investigate the construct validity of the model. This method is quite practical nowadays and well suited for this research which was done based on a theoretical framework whose components have to be confirmed. These analyses can confirm whether the actual data from the authentic samples were consistent with the theoretical framework or not. In this study, the CFAs was conducting using the LISREL program.

4. Results and Discussion

The results of first order confirmatory factor analysis show that the factor loading of the first factor - firm resource – consists of (i) financial capital, (ii) physical resources, (iii) human resources, (iv) technological resources, and (v) organization resources. It was found that the standardized item factor loadings were between 0.62 – 0.92, and R^2 between 0.38 – 0.85. The heaviest loading variable was human resources, which received a standardized factor loading

at 0.92 ($R^2 = 0.85$). The second factor - business networks - consists of (i) the joint operations of the business networks, (ii) creating trust in business networks, (iii) co-culture organizations for promoting networks, and (iv) knowledge sharing. It was found that the standardized item factor loadings were between 0.70 – 0.90, and R^2 between 0.50 – 0.82.

Table 1: Average Variance Extracted (AVE), Construct Reliability (CR) and Factor Loading of the First Order CFA

Key Factors Indicator	AVE	CR	Key Components Indicator	b	B	SE	t	R2
Firm resource	0.58	0.87	-Financial capital	0.98	0.78	0.08	12.68*	0.60
			-Physical resources	0.97	0.81	0.07	13.41*	0.65
			-Human resources	1.18	0.92	0.07	16.35*	0.85
			-Technological resources	0.96	0.62	0.10	9.48*	0.38
			-Organization resources	1.03	0.66	0.10	10.32*	0.44
Business networks	0.63	0.87	-Joint operation of the business networks	1.57	0.90	0.10	15.90*	0.82
			-Creating trust in business networks	1.44	0.85	0.10	14.27*	0.72
			-Co-Culture organization for promoting networks	1.27	0.71	0.11	11.19*	0.50
			-Knowledge sharing	1.31	0.70	0.12	11.13*	0.50
			Maritime logistics service	0.50	0.83	- Reliability	0.87	0.79
- Responsive	0.82	0.75				0.07	11.93*	0.56
- Assurance	0.76	0.72				0.07	11.10*	0.51
- Empathy	0.77	0.60				0.09	8.97*	0.37
- Service cost	0.90	0.63				0.10	9.36*	0.39
Chi-Square(χ^2) = 91.75, p = 0.024, df = 67, χ^2/df = 1.37, GFI = 0.94, AGFI = 0.91, CFI = 0.99, RMSEA = 0.042 and SRMR = 0.057								

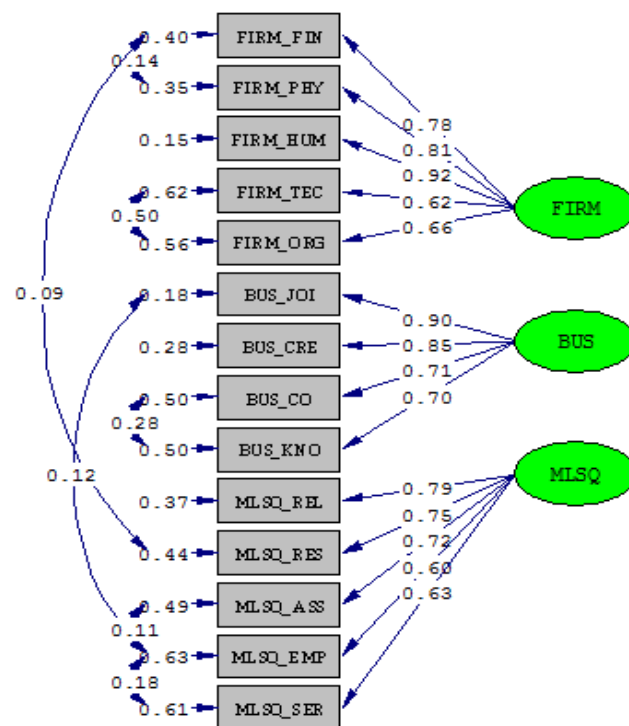
* $p < .01$

The heaviest loading variable was joint operations of the business networks. It has a standardized factor loading of 0.90 ($R^2 = 0.82$). Finally, the third factor - maritime logistics iv) empathy, and (v) service cost. It was determined that the standardized item factor loadings were between 0.60 – 0.79, and R^2 between 0.37 – 0.63. The heaviest loading variable was reliability. The standardized factor loading is 0.79 and $R^2 = 0.63$. These 14 variables affect the competitiveness of ocean freight forwarders as shown in Table 1.

Table 1 shows that the average variance extracted indices of the key factor indicators were between 0.50-0.63, which are higher than 0.50 (Hair et al., 2010). Additionally, the construct reliability indices of the key factor indicators were between 0.83-0.87, which are higher than 0.70 (Hair et al., 2010). These indices confirm that the model developed by the researchers contains convergent validity and high construct reliability.

Table 2: Goodness of Fit Index Analysis

Goodness of Fit Index	Criteria	Statistical Model	Results
χ^2	Not Significant	$\chi^2 = 91.75$ ($p = 0.024$), $df = 67$	Passed
χ^2/df	<2.00	1.37	Passed
CFI	≥ 0.95	0.99	Passed
GFI	≥ 0.90	0.94	Passed
AGFI	≥ 0.90	0.91	Passed
RMSEA	0.05-0.08	0.042	Passed
SRMR	>0.08	0.057	Passed



Chi-Square = 91.75, df = 67, P-value = 0.024, RMSEA = 0.042

Figure 1: Model of the First Order CFA of the Factors Affecting the Competitiveness of Ocean Freight Forwarders

The results of the Goodness of Fit Index analysis shown in Table 2 indicate that the Goodness of Fit Index (GFI) = 0.94, the Adjusted Goodness of Fit Index (AGFI) = 0.91, the Comparative Fit Index (CFI) = 0.99, the Root Mean Square Error of Approximation (RMSEA) = 0.042, and the Standardized Root Mean Square Residual (SRMR) = 0.057,

The results of the second order confirmatory factor analysis indicate that the three factors considered (firm resource, business networks, and maritime logistics service quality) took effects on competitiveness. All factors have significantly positive standardized factor loadings ($P < 0.01$). This confirms that the three factors are determinant factors affecting the competitiveness of Thai ocean freight forwarders. The maritime logistics service quality factor received the heaviest standardized factor loading (0.92 and $R^2 = 0.84$), followed by the firm resource factor, whose standardized factor loading was 0.84 ($R^2 = 0.70$). The least standardized factor loading was that of the business networks factor with a standardized factor loading = 0.46 and $R^2 = 0.21$.

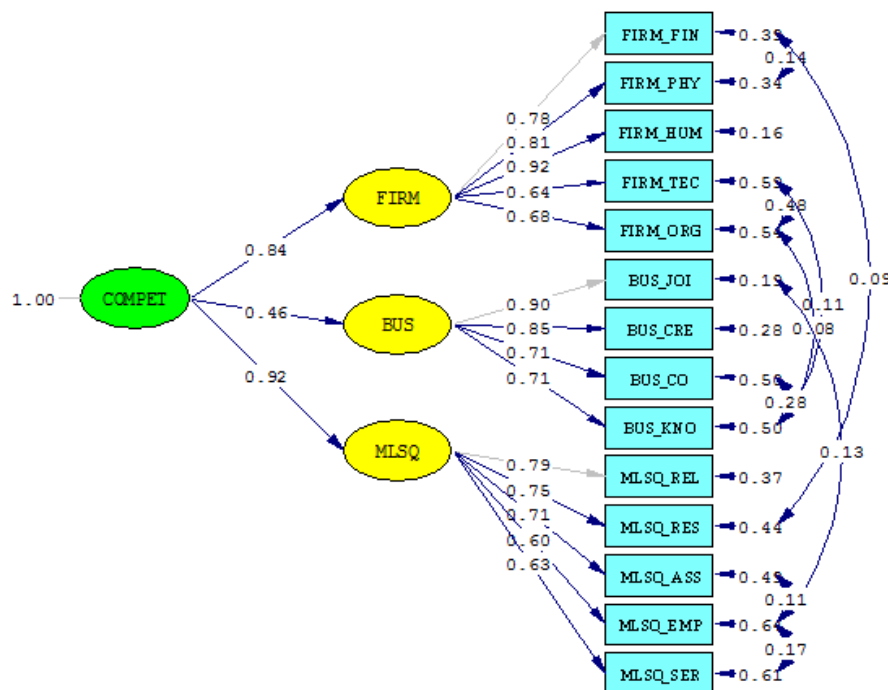
Thus, firm resource, business networks, and maritime logistics service quality are factors affecting the competitiveness of ocean freight forwarders similarly to the hypotheses. The results confirm the CFA model of factors affecting the competitiveness of ocean freight forwarders in keeping with the theoretical framework as shown in Table 3.

Table 3: Factor Loading of Factors Affecting the Competitiveness of Ocean Freight Forwarders from the Second Order CFA

Key Indicator	Factors	b	B	SE	t	R ²
Firm resources		0.83	0.84	0.10	8.36*	0.70
Business networks		0.72	0.46	0.12	5.77*	0.21
Maritime logistics service quality		0.79	0.92	0.09	8.94*	0.84
Chi-Square (χ^2) = 75.85, p = 0.17, df = 65, χ^2 / df = 1.17, GFI = 0.95, AGFI = 0.92, CFI = 1.00, RMSEA = 0.028, SRMR = 0.054						

* p < .01

The results of the Goodness of Fit Index analysis of the model of the second order CFA of factors affecting the competitiveness of Thai ocean freight forwarders show that the Chi-Square (χ^2) = 75.85, p = 0.17, df = 65, the Goodness of Fit Index (GFI) = 0.95, the Adjusted Goodness of Fit Index (AGFI) = 0.92, the Comparative Fit Index (CFI) = 1.00, the Root Mean Square Error of Approximation (RMSEA) = 0.028, the Standardized Root Mean Square Residual (SRMR) = 0.054, which are close to zero. The model is thus consistent with the empirical evidence shown in Figure 2.



Chi-Square = 75.85, df = 65, P-value = 0.17, RMSEA = 0.028

Figure 2: Model of the Second Order CFA of Factors Affecting the Competitiveness of Ocean Freight Forwarders

5. Conclusion and Recommendations

The model of first order CFA determinants affecting the competitiveness of Thai ocean freight forwarders developed by the researchers is consistent with the empirical evidence. Moreover, the most influential variable, maritime logistics service quality, is reliable. The second most influential variable was firm resources, and the third one, human resources are also reliable. The most influential variable of the business networks factors was joint operation of business networks.

The model of second order CFA of factors affecting the competitiveness of Thai ocean freight forwarders consists of firm resources, business networks, and maritime logistics service quality. These three factors were consistent with the empirical evidence. LISREL was used to conduct a construct validity analysis meant to confirm the research hypothesis, evaluate the model construct and examine the consistency of the model with the empirical evidence. The model can therefore be further used for developing the competitiveness of Thai ocean freight forwarders.

Recommendations

In order to stimulate Thai ocean freight forwarders to increase their competitiveness potential, management should focus on three factors. These include maritime logistics service quality, firm resources, and business networks. With regard to maritime logistics service quality factor, ocean freight forwarders should focus on reliability variables such as accuracy of documents, accurate price calculation, reliability of booking space, and reliability of service performance. As to the firm resources factor, ocean freight forwarders should focus on human resources variables, most notably the knowledge of customer needs and requirements, rewards to employees, experience and expertise of employees, evaluation of employee performance, and skillful human resources.

As to business networks, the third factor, ocean freight forwarders should focus on joint operations of the business networks. This involves working together, sharing resources, and making joint decisions. Moreover, as the second order confirmatory factor analysis shows, these three factors are key elements affecting the competitiveness of ocean freight forwarders. Ocean freight forwarders should therefore develop these factors to increase their competitive potentials and be able to compete with international competitors. In light of this study, the following suggestions are proposed:

- Human resources variables consist of knowledge of customer needs and requirements, rewards to employees, experience and expertise of employees, evaluations of employee performance, and skillful human resources. All these variables are considered to be the most influential factors affecting the competitiveness of Thai ocean freight forwarders. As mentioned earlier, they should therefore take advantage of these factors to strengthen their competitiveness.
- Maritime logistics service quality factors affect competitiveness the most, followed by firm resources and business networks factors, respectively. Ocean freight forwarders should therefore focus on these three factors and develop them in order to increase their competitive potentials.
- Future studies should look at international ocean freight forwarder, not just Thai ones, to further understand the factors that influence their competitiveness.

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Enterprise Resource Planning (ERP) Adoption in the Thai Agricultural Sector

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Abstract

The Thai economy has been trying to adapt to the disruptive emerging new technologies. To this end, the Thai government has been actively delivering several modern technological policies and structural changes in the public administration. In the business sector, all business organizations have also been required to transform their current enterprise management so as to exploit the benefits of the technology stream and maintain their resilience. This study examines an actual reaction. More specifically, it focuses on the use intention of the agricultural sector with regard to enterprise resource planning (ERP) technology, which is meant to enhance their ordinary management basis. The technology acceptance model (TAM) is the main theory used to make this determination, along with three success factors of ERP study: government support (GOV), business process re-engineering (BPR) and training (TRA). They are deployed as key indicators to predict intention characteristics of the agricultural enterprise. A questionnaire is used to survey the rice mill industry, which is a representative of the agricultural industry. The results are evaluated with the path analysis under the structural equation modeling technique. The findings indicate that three ERP success factors and two factors from the TAM have both positive direct and indirect relationships to the possibility for agricultural organizations to deploy ERP. In terms of managerial implication and policy recommendation, BPR is determined as the key parameter to fulfill the intention of ERP adoption.

Keywords: Enterprise Resource Planning (ERP), Technology Acceptance Model (TAM), Business Process Re-engineering (BPR), Use Intention (UI), Behavioral Intention (BI).

1. Introduction

As a standard corporate management program designed to enhance internal competitive advantages by integrating all business units together under holistic business planning and operation, Enterprise Resource Planning (ERP) has been widely adopted by organizations with complex structures (Davenport, 1998). ERP, however, has been applied on a small scale (and in many cases unproductively) by small and medium-sized enterprises (SME) and rural businesses. In addition, the popularity of applying ERP into these businesses is low. Yet, in developing countries, although SMEs approximately represent 90-95% of all business organizations, they make a significantly low contribution to the national economies in comparison to big corporations (World Bank, 2016). Take for example Thailand, the country on which this study focuses. In 2017, Thai SMEs contributed 42.4% of the national gross domestic product (GDP), which is slightly less than the 43% GDP contribution of large companies (OSMEP, 2018). What these figures suggest is that the growth rate of the Thai economy largely depends on the growth rate of SMEs, which clearly require further developments for the sake of the national economic prosperity of great import in this study, the GDP contribution of the agricultural sector ranges between 11.4% and 8.7% of the total GDP (OSMEP, 2018).

This makes improving the competitive advantage of agricultural SMEs a national concern. Whilst less competitive with the other sectors in term of funds, business management, and technology deployment, agricultural businesses enjoy an advantage in terms of location, business size and structural adjustment. So, once, an appropriate business management system or software is in place and fully adopted, this sector could fully benefit from the innovative economy, especially in terms of cost structure. This raises the issue of whether the adoption by these SMEs and rural businesses of ERP would improve their performance. Changing from existing business operations to an ERP system, however, can be very difficult and has no standard pattern yet. No study has concretely addressed the adoption of ERP by Thai agricultural businesses, a sector, which in developing countries is relatively neglected by this modern business system (Duangekanong, 2014). In Thailand, governmental efforts to develop the agricultural sector are nothing new. They started long ago with a policy called the National Economic Development Program (NESDP), concerned in part with the export of agricultural products to boost the country's economic capability. There were, however, several undesirable aftermaths associated with this policy, such as highly degraded natural resources (NESDB, 1961).

In an attempt to address prior shortcomings, the Thai NESDP subsequently adopted a new policy promoting sustainable agriculture, creating value-added activities, and using information technology (IT) to create an innovative agriculture and smart farms. This policy offered many opportunities for the Thai agricultural industry to change its business strategy and utilize more advanced management programs (NESDB, 2007). With its focus on industry 4.0, the current national development policy presents even more opportunities for innovation, IT adoption, and the emergence of breakthrough systems (NESDB, 2016). These changes in the Thai national policy associated with industry 4.0. provide the perfect scenario for introducing the use of the ERP system or other advanced business approaches as a revolution in the agricultural sector. ERP is widely accepted as giving out sustainable benefits for systematic management as it produces better process efficiency toward the quality of decision making at each layer of an organization (Hsu, Lai, and Weng, 2008; Ngai, Law, & Wat, 2008).

Alternatively, a communication process in the agricultural organization is indispensable to enable an effective ERP communication diffusion (Verdouw, Robbemon, & Wolfert, 2015). An obstruction to the growth of the agricultural ERP market, however, is that the standard ERP package cannot be fully deployed in this sector. Besides, most ERP software has proven to be unproductive for this business category. Consequently, this study seeks to identify the reasons why ERP is not embraced in the Thai agricultural sector. For a justification of ERP capability in the Thai agricultural scenario, possible influences with regard to the intention of ERP – government, the theory of Reasoned Action (TRA), business process re-engineering (BPR), perceived ease of use (PEOU) and perceived usefulness (PU) – are needed to verify and explain an interconnected relationship in enabling the use of ERP with in this sector.

2. Literature Review

This section first focuses on ERP and then turns to the Technology Acceptance Model (TAM).

- *Enterprise Resource Planning (ERP)*

ERP was developed from a combination of Material Requirements Planning (MRP) and Manufacturing Resource Planning (MRP) by the Gartner Group, Stamford, Connecticut, USA, in order to re-systematize its internal system to empower internal business operation. In 1987, two German companies; Siemens and SAP, cooperated to create an enterprise-wide

system called 'ERP'. Sales of the program have since reached billions. ERP can be defined as the integration of multi-functions in an organization or single database and interconnected platforms of business (Davenport, 1998). ERP is highly beneficial to assimilate all functions and locations, especially with respect to ordinary systems (Gattiker & Goodhue, 2002). ERP provides support to all organizational activities, such as manufacturing and logistics, finance and accounting, sales and marketing, and human resources (Jacobs and Whybark, 2000; Markus, Axline, Petrie, & Tanis, 2000). Each process is directly connected with one another at a real time operation under a systematical optimization that lead to work precision, data collection, rapid adjustment, forecastability, time and budget optimization (Madanhire & Mbohwa, 2016).

For SMEs, ERP is tailored to accommodate the specific needs of each business requirement by decomposing completed ERP modules to suit each organizational component. All of the sub-modules are systemically configured with ERP principal, especially in the process optimization among all interconnected activities under the real time data collection and optimization (Huang & Yasuda, 2016). Several ERP systems, however, have failed to be business drivers because of workers' resistance (Stratman & Roth, 2002). According to Al-Mashari and Zairi (2000), "successful ERP operation arises from an appropriate change management" (p.306). Using change management strategies to overcome workers' resistance and enhance the infusion of ERP in the workplace is thus another solution to reduce failure of ERP adoption. After conducted a non-adept study for elaborating a change management strategy behind the success of ERP implementation, Adel (2001) concluded that dealing with resistance from the workforce is an inextricable strategy.

- Motivations for ERP-Driven Business Change

The ERP configuration process directly affects how ERP will constrain or transform an existing business practice. A change in the business process is justified by the fact ERP cannot be fitted with the exiting process (Gattiker & Goodhue, 2002). Figures of ERP adoption successes disclosed by SAP show that 80% capability to be accommodated in the original business process. However, more than half those figures required ERP adjustment (Scott & Kaindl, 2000). ERP practitioners and experienced managers tend to believe that original practices are usually incompetent and require process re-engineering along with a modification of the ERP process installment for the sake of the business performance and for establishing new standards in each organization (Connolly, 1999; Pereira, 1999).

- ERP in the Agricultural Sector

The workforce quality in the agricultural sector tends to be relatively lower than in the industrial sectors. Business patterns proceed by feeling and experiences rather than through a work standard, data collection and analysis. Those constraints run counter to the main purpose of the initial ERP developed from manufacturing computer applications (Shehab, Sharp, Supramaniam, & Spedding, 2004). An empirical research on adopting ERP to farms conducted by Hyeung, Rock, and Chan (2015) suggest the following five possible effects on ERP applied to farm businesses:

1. ERP leads to the creation of a work standard and business process optimization;
2. ERP contributes to information accuracy and centralized information control;
3. ERP contributes to better inventory management;
4. ERP adoption can improve operation efficiency and optimize control of all equipment;
5. Time in the process cycle is monitored and readjusted to meet the fastest time and make the process flow efficiently from the mutual information sharing system;
6. The cycle time of a whole business is efficiently optimized and promptly adjusted as per the information sharing system of ERP.

Critical Success Factors in ERP

According to studies by Yu and Tao (2009) and Shatat (2015) conducted to identify the critical success factors (CSFs) that affect the ERP system's implementation success, a criteria is to judge by degree of citation each factor in ERP literature. A magnitude of citation is ranked from high to low; top management support, project management business process reengineering, user training & education and user involvement are at the high-rated degree of citation in the ERP literature (Shatat, 2015). Table 1 presents the conclusion of the main factors and the degree of citation for each factor in the ERP literature.

Table 1: Conclusion of CSFs and Degree of Citation for Each Factor in ERP Literature (Shatat, 2015; Yu & Tao, 2009)

CSFs in Literature	Degree of Citation in Literature
Top Management Support	High
Project Management	High
Business Process Reengineering	High
User Training & Education	High
User Involvement	High
Business Plan & Vision	Medium
Careful Package Selection	Medium
Change Readiness & Culture	Medium
Clear Goals & Objectives	Medium
Learning Competency	Medium
Minimal Customization	Medium
Monitoring & Evaluation of Performance	Medium
Project Champion	Medium
Strategic IT Planning	Medium
Teamwork & Composition	Medium
Vendor Support	Medium
Appropriate Business & IT Legacy Systems	Low
Data Analysis & Conversion	Low
Education on new Business Processes	Low
Partnership with Vendor	Low

Technology Adoption

Technology adoption is defined as changes in logical thinking influenced by information about technological perception and by the technology itself. Technological perception is, theoretically, initiated by size, driving capacity, technical units, delay, binary operation and path dependency information between input and output. This decisive information has to be judged by a transformation at the lowest technological needs to an appropriate use (Dodds, Monroe, & Grewal, 1991). In addition, technology adoption is concerned as preliminary foundation for ERP adoption because ERP concept is originated from an integration of the system thinking and technological use.

The Technology Acceptance Model (TAM)

The technology acceptance model (TAM) was officially proposed by Davis (1989). This approach was effectively used to estimate individual computer acceptance behavior (Ajzen & Fishbein, 2000). The TAM was initially created from a combination of intention elements on the basis of the Theory of Reasoned Action (TRA) developed by Ajzen and Fishbein (2000). It is also based on perceived usefulness (PU) and perceived ease of use (PEOU) as conceived by Venkatesh and Davis (2000). In the TAM structure, an individual's actual behavior intention (BI) and use intention (UI) toward the technology can be forecasted by PU and PEOU. Davis (1989) defines PEOU as "the degree to which a person believes that using the system will be free of effort" (p. 130). It has also been defined as "the degree that an individual intends to use the product with effortless as well" (Davis, Bagozzi, & Warshaw, 1989, p. 990).

PU is "the degree to which a person believes that using a particular system could raise their job performance" (Davis, 1989, p. 330). It is considered to be a key element to increase job performance and motivation at an individual level. It can potentially be influenced by PEOU since a user who perceives an ease of use will appreciate a convenient feeling and eventually believe in a system usefulness (Robey & Farrow, 1982). UI is another element affecting a persons' usage of each specific technology. It is referred to as "a measure of the strength of one's intention to perform a specified behavior" (Davis, 1989, p. 330). As an extension of the TAM, the Unified Theory of Acceptance and Use of Technology model (UTAUT) exploits UI by using constructs from Davis (1989) that are widely accepted in several of technology acceptance studies (Venkatesh et al., 2003). As a result, the TAM is the most compact and precise model among other technology adoption theories such as UTAUT, TRA, and Model of Personal Computing Utilization (MCPU), for making the extended model grounded from the motivational purposes (Ong and Lai, 2006; Pituch & Lee, 2006; Sánchez & Hueros, 2010).

Government Support (GOV)

Government Support (GOV) is a crucial economic engine. This support comes in the form of policies and special privileges. It is an external power that is distinct from corporate capability and could make a significant change to national development, especially in developing countries (Hyeung et al., 2015). Since government power in developing countries is strong up to a certain level, information technologies and other innovations are also mutually vital through national support schemes, particularly through receiving extra resources through incubation government programs (Besley & Burgess, 2002).

Business Process Re-Engineering (BPR)

Business Process Re-Engineering (BPR) was initiated by Hammer (1990) who stated that "re-engineering works don't automate and obliterate" (p.107). Hammer (1990) and Manganelli and Klein (1994) defined BPR as a radical strategy adjustment giving value-added within the business process. BPR also has an ability to reshape work systems, policies, and organizational configurations to modernize an existing workflow and organizational competency (Manganelli & Klein, 1994). In terms of business competency, Hammer and Champy (2009) found that BPR has resulted in a reconsideration and a radical reform of the business processes to achieve significant improvements in terms of cost, quality, service, and speed. In terms of competitive advantage, Ettlie, Perotti, Joseph, and Cotteleer (2005) and Velcu (2010) determined that BPR could directly influence corporate success through increasing performance, and raising internal efficiency. In short, BPR is a powerful instrument that can be used for restructuring non-valued activities, minimizing the complexity of the business processes, and removing wasteful processes.

3. Conceptual Framework and Hypothesis Development

The conceptual model shown in Figure 1 proposes to study influences toward the use intention by combining well-accepted elements of TAM (PEOU, PU and IU) with two organizational drivers and externalities (TRA, BPR and GOV).

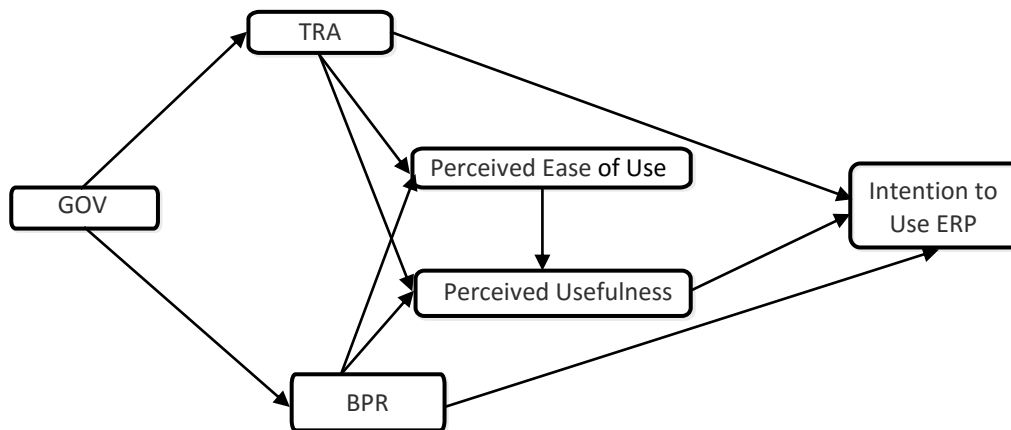


Figure1: Conceptual Model (Davis, 1989)

- Government (GOV) Impact

The role of government is similar to that of management in the business realm. Given this similarity, this research uses GOV to fill the role of top management in the context of ERP success factor. Public administration research by Hu, Liang, Saraf, and Xue (2007) indicates that GOV has a direct relationship to a business facility and use intention for this facility. Research by Wang and Chen (2006) shows that “system training, government support, and organizational support are the significant elements for enabling the use of a personal computer” (p.1033). In economic research, the top management or external supports could encourage all staffs to have a better performance (Bingi, Sharma, & Godla, 1999). In addition, the support could also be indirectly influential to the awareness of a system usefulness (Urbach, Smolnik, & Riempp, 2010). A rural development study by Besley and Burgess (2002) presented two potential governmental support schemes for technology enabling in case of the SME in developing counties. One is business incubation so as to enhance standards, the other is subsidies and tax privileges.

H1: Increasing government support will have a positive direct effect on Training for the ERP system.

H2: Increasing government support will have a positive direct effect on the Business Process Re-engineering for the ERP system.

- Training (TRA) Impact

TRA is a key element which allows the adoption and implementation of several applied technological research. The significance of TRA has been highlighted by a number of scholars who found that appropriated training ERP users would give rise to sudden changes in the business operation (Bradford and Florin, 2003, and O'Leary, 2000). In addition, TRA is a simplifying tool for ERP use. Several empirical studies have tested the existence of a relationship between TRA, UI and BI (Bradford and Florin, 2003, O'Leary, 2000, and Ruivo et al., 2014).

H3: Increasing ERP training will have a positive direct effect on how to conduct the Business Process Re-engineering for using the ERP system.

H4: Increasing ERP training will have a positive direct effect on the Perceived Ease of Use of the ERP system.

H5: Increasing ERP training will have a positive direct effect on the Perceived Usefulness of the ERP system.

H6: Increasing ERP training will have a positive direct effect on the Intention to Use the ERP system.

- Impact of Business Process Re-Engineering (BPR)

A strong integration of the IT and BPR could spontaneously improve an organizational productivity (Johansson, McHugh, Pendlebury, & Wheeler, 1993). IT adoption is used as a crucial element to communicate efficiency within business units, optimize the existing business processes, and minimize the operation cost of the businesses. BPR is not only deployed to re-computerize the business processes, but is an essential reform of the original business processes (Hyeung et al., 2015). An empirical study by Ram and Corkindale (2014) suggests that reshaping an existing business processes can lead to the success of ERP adoption and implementation.

H7: Conducting Business Process Re-engineering will have a positive direct effect on the Perceived Ease of Use of the ERP system.

H8: Conducting Business Process Re-engineering will have a positive direct effect on the Perceived Usefulness of the ERP system.

H9: Conducting Business Process Re-engineering will have a positive direct effect on the Intention to Use the ERP system.

- TAM Impact

According to Davis (1989), the original TAM scholar, “there is a strong relationship between PEOU to PU, whilst a linkage between PEOU and UI was only implied with theoretical discrepancies” (p.332). PU is theoretically stronger than PEOU in the prediction of UI (Davis, 1989). PU is also found to be an initial influence to measure the cost reduction, revenue creation, transaction efficiency, increased competitiveness, expanded trading scope and error reduction in trading processes in the e-market study from (Holzmüller & Schlüchter, 2002).

H10: Increasing Perceived Ease of Use will have a positive direct effect on the Perceived Usefulness of the ERP system.

H11: Increasing Perceived Usefulness will have a positive direct effect on the Use of the ERP system.

4. Methodology

Research Design

Quantitative measurements along with a cross-sectional study are used as a research method to verify the path connections and predict the UI of ERP for the rice mill industry. The prediction variables comprise GOV, TRA, BPR, PEOU and PU. Those had both a direct and an indirect effect on UI.

Sampling

The research sample were obtained from the lists of two trustful sources; (i) the Agricultural Marketing Co-operative Limited (AMC); an organization under the Bank for Agriculture and Agricultural Cooperatives (BAAC), which includes 1,681 rice mills; and (ii) the Thai Rice Mills Association (TRMA) with 850 rice mill members and 980 rice traders. The TRMA list is seen as more reliable. As a result, the sample consists of rice mills from all parts of Thailand.

In addition, the survey respondents were representatives of the organization who have managerial and decision-making power as their answers must reflect all aspects and direction of each rice mill. Convenience sampling was used as the primary sampling method to capture available respondents of the Thai rice mill sector. Rice mills though are not evenly distributed throughout the country and are instead clustered in some specific areas. Hair, Black, Babin, and Anderson (2010) suggest a minimum of five times the total number of variables.

Questionnaire

The completed survey questionnaire (see Appendix 1) was translated into Thai and a pilot test was then conducted with a focus group a 30 rice mills prior to the survey distribution. The survey provided both demographics and attitude measurements. The demographic section included a set of questions on the respondents' personal profile; such as, age, experience and work position, and the rice mill profile (business experience, business generation and location). This section also includes decision questions to verify the level of ERP experience and understanding of each respondent (see Appendix). On attitude measure, all constructs are measured by using a five-point Likert-type scale ranging from (1) "strongly disagree" to (5) "strongly agree" (see Appendix 2).

Four questions relate to government support. They are a combination of questions from Mcknight et al. (2002), Pavlou (2003), Yuan, Lianxi, Garry, and Weiwen (2009), Nah, Zuckweiler and Lee (2003), Krumbholz and Maiden (2001), and Petroni (2002) respectively. Three TRA questions from Amoako-Gyampah and Salam (2004) and Muscatello, Small and Chen (2003) were slightly changed to suit the ERP context. Three BPR questions come from a combination of questions from Bradford and Florin (2003), Ehie and Madsen (2005), Grover et al. (1995), Hong and Kim (2002), and Hammer and Champy (2009) respectively. Four PEOU questions are based on a combination of questions from Davis (1989) and Venkatesh et al (2003), slightly modified to suit the rice mill industry. Three PU questions are based on Davis (1989) and Venkatesh et al. (2003) and rewritten to suit the rice mill industry. Three UI questions from Davis (1989) and Venkatesh et al. (2003) were adjusted for ERP use of rice mills. Two original BI questions from Davis (1989) and Venkatesh et al. (2003) and adjusted for ERP use of rice mills.

4. Data Analysis and Results

A reliability and exploratory analysis (EFA) and confirmatory analysis (CFA) were conducted to ensure that the data set is refined. For the hypothesis testing, the path analysis and the Structural Equation Modeling (SEM) under the Maximum Likelihood Estimation (MLE) were relied on to establish the covariance structure models. A SEM approach is the most appropriate one for this data analysis because it allows immediate analysis of all relationships and combines together with multiple regressions that demonstrate factor analysis in terms of the statistical fit (Mathieu & Taylor, 2006; Tabachnick, 2007). The SEM is also highly effective to measure errors within observed variables (Gefen, Straub, & Boudreau, 2000; Hair et al, 2010).

All empirical analyses were undertaken within the AMOS and the SPSS software packages. In the analytical procedure, the EFA and the reliability test were conducted in SPSS, and the CFA in AMOS using MLE, which is then followed by the path analysis of the structural relationships (Anderson & Gerbing, 1988). The survey was conducted through 850 samples obtained by telephone interviews. 76% were unreachable and the majority of them were not willing to disclose their details. A total of 205 interviewed respondents were used.

Table 2: Demographic Characteristics of Respondents

Characteristics	Frequency	Percentages (%)
Individual profile		
Ages		
Less than 20 year's old	2	1.0
21-30 year's old	13	6.3
31-40 year's old	71	34.6
41-50 year's old	45	22.0
51-60 year's old	54	26.3
More than 60 year's old	20	9.8
Genders		
Male	149	72.7
Female	56	27.3
Level of Education		
Lower than high school	8	3.9
High School	37	18.0
Vocational	25	12.2
Bachelor degree	101	49.3
Master degree	33	16.1
Doctoral degree	1	0.5
Position		
Business owner	88	42.9
Business heir*	45	22.0
Manager**	24	11.7
Supervisor	24	11.7
Normal staff	24	11.7
Work experience		
less than 1 year	2	1.0
1-5 years	22	10.7
5-10 years	53	25.9
11-20 years	82	40.0
21-30 years	20	9.8
31-40 years	26	12.7

Note: *is defined as direct decedent from business owner who currently run the rice mill, ** is defined as manager, who is a non-family member, currently runs the rice mill.

The survey questionnaires were mostly responded by males. 83% were in the age range of 31-60 years and almost 50% of them had a bachelor degree. In addition, 42.9% are rice mill owners. Most of the rice mills had been in business between 11- 40 years and the average manpower per rice mill was between 10-50 people. The majority of the respondents came from Northern Thailand, and the middle and west regions (28.8%, 26.8% and 23.4% respectively). There is no respondent from the southern region in this data collection. All of rice mills interview had no ERP experience, which implies that all respondents were not capable of BI.

Table 3: Rice Mill Profile

Characteristics	Frequency	Percentages (%)
<i>Rice mill profile</i>		
ERP experience		
Having ERP experience	0	0
None ERP experience	205	100
Business generation		
Establisher	97	47.3
2nd generation	78	38.0
3rd generation	28	13.7
4rd generation	1	0.5
Others	1	0.5
Manpower		
Less than 10	62	30.2
11-50	129	62.9
51-100	9	4.4
101-200	5	2.4
More than 200	0	0.0
Business experience		
Less than 1 year	8	3.9
1-5 years	8	3.9
5-10 years	17	8.3
11-20 years	66	32.2
21-30 years	33	16.1
31-40 years	54	26.3
41-50 years	19	9.3
More than 50 years	0	0.0
Geographical locations		
North region	59	28.8
North-Eastern region	28	13.7
Middle region	55	26.8
East region	15	7.3
West region	48	23.4
Total	205	100.0

Validity and Reliability Test

The Crombec's alphas of all constructs are above 0.7 as shown in Table 4. This means there are all accepted as per the criteria of 0.7 or above (Gravetter & Forzano, 2018; Hair et al, 2010; Nunnally & Bernstein, 1967). The EFA is also performed by using the Maximum-Likelihood function (ML) and the Promax rotation which validate all constructs prior to hypothesis testing. The loading factors used for all measured constructs are accepted under the allowable criteria because all measured constructs (loading factors) are above 0.5 (Chen & Tsai, 2007). The five constructs (GOV, TRA, BPR, PEOU and PU) are properly extracted without any factor interference. As a result, these five prediction variables are well accepted for a prediction of the dependent variable, UI. In addition, the KMO and Bartlett's test also ensure that all measuring samples are significant at a 0.001 level and meet the thresholds of sampling adequacy at 0.782, which is above the allowable criteria of 0.5. This EFA also indicates that those five factors can explain the 55.352 % total variance.

Table 4: Construct Validity and Reliability Assessment

Constructs	Items	EFA (loading)	α
Government support (GOV)	GOV1	0.827	0.798
	GOV2	0.766	
	GOV3	0.691	
	GOV4	0.622	
Training (TRA)	TRA1	0.892	0.812
	TRA2	0.807	
	TRA3	0.506	
Business process re-engineering (BPR)	BPR1	0.397	0.762
	BPR2	0.694	
	BPR3	0.917	
Perceived ease of use (PEOU)	PEOU1	0.482	0.700
	PEOU2	0.463	
	PEOU3	0.574	
	PEOU4	0.596	
Perceived usefulness (PU)	PER1	0.553	0.716
	PER2	0.694	
	PER3	0.575	
Use intention (UI)	UI1	-	0.772
	UI2	-	
	UI3	-	

Hypothesis Testing

This empirical research conducted a multiple linear regression analysis using the co-variance structure analysis (Arbuckle & Wothke, 1999). For hypothesis testing, the path analysis with the MLE was established for covariance structure models. As Table 5 indicates, the proposed empirical model has met the fit criteria of several goodness-of-fit indexes. Such criteria include the rules of thumb (Schermelleh-Engel, Moosbrugger, and Müller, 2003). The empirical model presents a number of critical fit-indexes: $X^2/DF = 2.151$; GFI = 0.986; AGFI = 0.925; CFI = 0.987; TLI=0.952; NFI=0.977; RMR = 0.02; RMSEA = 0.075; PCLOSE = 0.221; measuring values are not significant at the 0.072 level; Chi-square = 8.6029, Degree of freedom =4, and probability level=0.0718. According to those fit indexes, the research model satisfies all the goodness-of-fit indexes.

Table 5: Model Fit Results

	X^2/Df	Significant	GFI	AGFI	RMR	CFI	TLI	NFI	RMSEA	PCLOSE
Acceptable criteria	< 3	$p > .05$	$\geq .95$	$\geq .90$	< .05	$\geq .90$	$\geq .90$	$\geq .90$	<0.08	$p > .05$
Research model	2.151*	0.072*	0.986*	0.925*	0.02*	0.987*	0.952*	0.977*	0.075*	0.221*

Note: *value is accepted

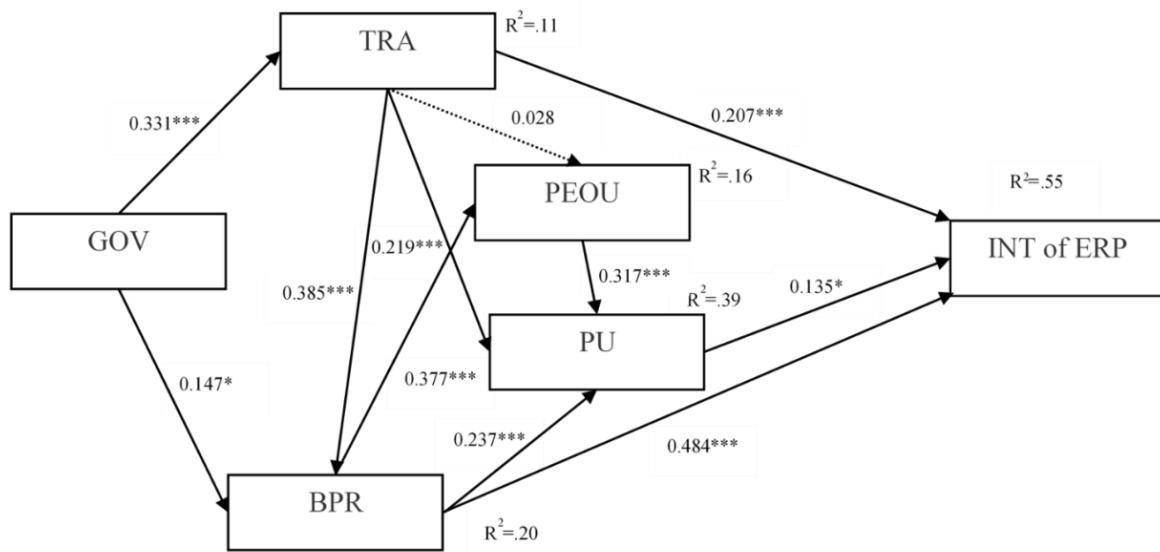
Table 6 summarizes the hypothesis results. Only one hypothesis (H4) is rejected.

Table 6: Summary of Hypothesis Development

	Hypothesis	Expected Effect	β	Sig.	Results
H1	<i>Increasing Government support will have a positive direct effect on Training for the ERP system.</i>	+	0.331	0.000	Accepted
H2	<i>Increasing Government support will have a positive direct effect on the Business Process Re-engineering for using the ERP system.</i>	+	0.147	0.026	Accepted
H3	<i>Increasing ERP Training will have a positive direct effect on the Business Process Re-engineering for using the ERP system.</i>	+	0.385	0.000	Accepted
H4	<i>Increasing ERP Training will have a positive direct effect on the Perceived Ease of Use the ERP system.</i>	+	0.028	0.683	Rejected
H5	<i>Increasing ERP Training will have a positive direct effect on the Perceived Usefulness the ERP system.</i>	+	0.219	0.000	Accepted
H6	<i>Increasing ERP Training will have a positive direct effect on the Intention to Use the ERP system.</i>	+	0.207	0.000	Accepted
H7	<i>Conducting Business Process Re-engineering will have a positive direct effect on the Perceived Ease of Use of the ERP system.</i>	+	0.377	0.000	Accepted
H8	<i>Conducting Business Process Re-engineering will have a positive direct effect on the Perceived Usefulness of the ERP system.</i>	+	0.237	0.000	Accepted
H9	<i>Conducting Business Process Re-engineering will have a positive direct effect on the Intention to Use the ERP system.</i>	+	0.484	0.000	Accepted
H10	<i>Increasing Perceived Ease of Use will have a positive direct effect on the Perceive Usefulness of the ERP system.</i>	+	0.317	0.000	Accepted
H11	<i>Increasing Perceive Usefulness will have a positive direct effect on the Intention to Use the ERP system.</i>	+	0.135	0.014	Accepted

Firstly, the relationships between GOV to TRA and BPR are accepted with positive relationships. However, the β and significant level between GOV and TRA ($\beta=0.331$, $t=0.000$) is stronger than the β and significant level between GOV and TRA ($\beta=0.147$, $t=0.026$). Secondly, the relationships between TRA to BPR, PU and UI are accepted with all of them positively related. Only, the relationship between TRA and PEOU is rejected. The relationship between TRA and BPR ($\beta=0.385$, $t=0.000$) is stronger than the relationship between TRA and PU ($\beta=0.219$, $t=0.000$), and the relationship between TRA and IU ($\beta=0.207$, $t=0.000$). Thirdly, the relationships between BPR and PEOU, PU and UI are accepted with all of them positively related with the highest significant level. The relationship between BPR and IU ($\beta=0.487$, $t=0.000$) is stronger than the relationship between BPR and PEOU ($\beta=0.377$, $t=0.000$), and the relationship between BPR and IU ($\beta=0.237$, $t=0.000$). Finally, the relationship between PEOU and the PU ($\beta=0.317$, $t=0.000$) is stronger and higher in the level of significance than the relationship between PU and UI ($\beta=0.135$, $t=0.014$).

Figure 2 presents the path model results. There are five paths with the significant relationships. Those path relationships are explained in terms of the coefficient of determination (R^2) accordingly. TRA is explained by 11% ($R^2=.11$) variance of GOV; BPR by 20% ($R^2=.2$) variance of GOV; PEOU by 16% ($R^2=.16$) variance of BPR, PU by 39% ($R^2=.39$) variance of PEOU, PU and BPR. As to IU, it is explained by 55% ($R^2=.55$) variance of TRA, BPR and PU.



Note: * $p \leq 0.05$, ** $p \leq 0.01$ and *** $p \leq 0.001$

Figure 2: Path Analysis and Model Results

5. Discussion and Conclusion

Since all rice mills sampled have never used ERP in their businesses, this study reflects only a dimension of the non-ERP experience users because. This means that the Thai rice mill industry is not yet familiar with ERP. The empirical results clearly present potential influences along with all interrelationships incurred by both external influence and internal adjustments that are capable of encouraging ERP use intention. In terms of external influence, rural development research by Besley and Burgess (2002) suggests that government schemes in developing countries could have a direct effect on technology enabling, provided these schemes are in the form of financial support and business incubations. Besley and Burgess' findings, however, are not consistent with the results in this study, which shows that government support schemes will not directly influence the use of ERP in the agricultural sector. There need to be training and business process re-engineering acting as moderators. But direct government support has a different effect on technology adoption in advanced industries such as the adoption of computers in medical research (Wang and Chen, 2006).

Government schemes could instigate and transform an existing business to be more technologically friendly (Rajan & Baral, 2015). Advanced education and training programs, on the other hand, could be easily pushed by external support, especially in the case of organizations receiving government funds (Urbach et al, 2010; Nwankpa & Roumani, 2014). So ERP training could be highly accepted if supported by significant contribution from the government. Conducting training could possibly lead to ERP adoption. ERP's training could also significantly contribute to the organization restructuring and bring about a perception of ERP's usefulness prior to encouraging ERP adoption. These findings are in-keeping with a number of studies on the key factors to successful ERP adoption (Bingi, Sharma, and Godla, 1999; Somers and Nelson, 2001). These studies suggest that the training program is the key success for ERP adoption. O'Leary (2000) and Bradford and Florin (2003) concluded that appropriate training will result in the re-engineering of business processes toward organizational benefits.

Another critical finding from this empirical study is that there is a direct impact from training on the use intention of ERP. This finding is corroborated by several studies (Muscatello and Chen, 2008); Bradford and Florin, 2003; and Ruivo, Oliveira, and Neto, 2014). As to internal adjustment for this agricultural scenario, the TAM construct proposed by Davis (1989) can be applied as a mediator between the effect of training and business re-engineering through the intention of the ERP adoption. Regarding re-engineering influence, business process re-engineering could generate an intention to use ERP. However, one of the challenges of re-engineering is that the perception of easiness and usefulness in ERP must be encouraged along with an implantation of business re-engineering. For theoretical contribution, our research finding supports other scholars in different work scopes. Hyeung et al (2015) proposed that an organization re-engineering could conveniently accommodate adopting IT investment and Ram and Corkindale (2014) suggested that a better and more suitable business process could provide more chances for success in ERP adoption and implantation.

Business Implications

Training and business process re-engineering are key components to change perceptions toward ERP adoption and implantation in agricultural businesses with non-ERP experience. In this study, business re-engineering is more important for rice mills due to the existing work process of this business, especially in rural areas where it is generally primitive and less complex than high standard business corporate patterns. Once, the work process shifts from manual to systematic operations, this change will allow ERP to be easily adopted since ERP is more compatible with a standardized and systematized organization. In addition, internal training requires in parallel to readjust the level of knowledge and maintain personal confidence from a different work process. Changing in business generations could also be critical in terms of change in ERP adoption scenario as under the assumption that younger generations will be more technologically aware, ERP adoption or usage will be possibly higher.

In term of ERP software deployment, the developer and business owners should be in agreement with the basis of the changes in the business process needed to satisfy ERP operations (Gattiker and Goodhue, 2002). The ERP system will potentially enhance the complete advantage of the agricultural business but software developers must work from the non-IT background and customize it to meet the Thai agricultural characteristics. In addition, operating the interphases of ERP must be user friendly and the ERP system must be distinctively functional, especially in term of tangible benefits, such as cost reduction, manpower reduction and real time communication. Finally, an important challenge for agricultural organizations is seemingly to find a best-fit systematical pattern that all enterprises are entirely willing to follow. A consultancy and training from an experienced party are alternatively viable for agricultural enterprises, which are less self-dependable.

Policy Recommendations

Government contributions such as financial resources, tax privileges and information support schemes are less likely to enable a direct use of ERP in Thai agricultural businesses (Besley & Burgess, 2002). The most viable opportunity for the effective interference is thus to understand the existing operation and business nature of the agricultural sector. As this study suggests, the support scheme should be grounded on the logical thinking of the non-technical knowledge as all those agricultural enterprises have no ERP background. Hence, appropriate support from the government is recommended in the form of knowledge sharing, consultancy and business incubation to create use awareness and values of the system rather than just in

the form of financial solutions. Until rice mills realize the importance of ERP use and the system usefulness, none of them will adjust their existing business processes to accommodate ERP system. A significant challenge of any government scheme is to create continuous and tangible support that could instigate a change in the business paradigm and make businesses realize the value of ERP. Developing policies, such as enhancing competitive advantages through technological adoption and business readjusting programs for the economy 4.0, are the greatest concerns of the current national propagations and supports. However, these policies must specifically comply with agricultural and rural business behaviors, which are dramatically different from corporate standards.

At the present time, the Thai government has enthusiastically adopted several schemes and projects for technological changes via government agencies and funding in technological co-operation research programs between universities and businesses. But this support structure is relatively limited to big companies and not enough evenly dispersed to include rural opportunities. An existing example of government support is the Division of the Digital Industry Development (DDID), a government agency under the ministry of industry. It offers ERP support through educational programs, in-depth consultancy, and a list of recommended ERP developers to registered SMEs (DDID, 2019). Nevertheless, this support under a national program designed to enhance a firm's competitive advantage through the use of digital tools is very specific to the industrial sector rather than to agricultural businesses.

Limitations

There are three main limitations to this study. Firstly, the public data base is not trustworthy and not updated. 76% of the contact lists are unreachable. This affects the precision of the sample size calculation. Secondly, this study is solely subjected to samples with non-experience of ERP, which means that adoption characteristics could be possibly changed with samples having ERP experience. Lastly, the conclusion from the rice mill industry could not strongly generalize the whole population of the agricultural sector. However, time constraints and the size of the agricultural industry caused the random selection of the agricultural samples to be limited.

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Appendix 1

Survey Questionnaire: *Success Factors toward Adaptation of Technology for the Enterprise Resource Planning in Thai Agricultural Enterprise: Study of the Thai Rice mill.*

Instructions

Answer questions as they relate to you. For most answers, check the box(es) most applicable to you or fill in the blanks.

About You

1. Your Age

- ☐ Less than 20 years-old
- ☐ 21-30 years-old
- ☐ 31-40 years-old
- ☐ 41-50 years-old
- ☐ 51-60 years-old
- ☐ More than 60 years-old

2. Your Gender

(Select only one.)

- ☐ Female
- ☐ Male

3. Your Role

(Select all that apply.)

- ☐ Rice mill owner
- ☐ Rice mill heir
- ☐ Rice Executive
- ☐ Rice Supervisor
- ☐ Other (please identify: _____)

4. Your Education

(Select all that apply.)

- ☐ Lower than high school
- ☐ High School
- ☐ Vocational
- ☐ Bachelor degree
- ☐ Master degree
- ☐ Doctoral degree

5. How long have you been with this rice mill?

(Select only one.)

- ☐ less than 1 year
- ☐ 1-5 years
- ☐ 5-10 years
- ☐ 11-20 year
- ☐ 21-30 year
- ☐ 31-40 year
- ☐ more than 41 years

About Your Rice mill

6. *How many employees are at your rice mill?*

(Select only one.)

- ☐ 10 or less
- ☐ 11-50
- ☐ 51-100
- ☐ 101-200
- ☐ 201-300
- ☐ 301-400
- ☐ 401-500
- ☐ 501 or more

7. *How long does your rice mill established?*

(Select only one.)

- ☐ less than 1 year
- ☐ 1-5 years
- ☐ 5-10 years
- ☐ 11-20 years
- ☐ 21-30 years
- ☐ 31-40 years
- ☐ 41-50 years
- ☐ more than 51 years

8. *What is rice mill business generation?*

(Select only one.)

- ☐ Establisher
- ☐ 2nd generation (Son and Daughter)
- ☐ 3rd generation (Grandson and Granddaughter)
- ☐ 4th generation (Great-grandson and Great-granddaughter)
- ☐ Other (please identify: _____)

9. *Please identify your per product (rice milling) capacity per year in (Ton)?*

Please identify in number _____ (Tons)

10. *Where is you rice mill location (answer in city name)?*

City name _____

About Usage of Enterprise Resource Planning System

11. *Enterprise Resource Planning Knowledge Check?*

Please select one answer each that is best apply to question, leaving blank is also allow.

(1) ERP Stands for:

- ☐ A) Engaged Research and Planning
- ☐ B) Enterprise Reasoned Plan
- ☐ C) Enterprise Resource Planning
- ☐ D) Effective Resource Planning
- ☐ E) Electronic Research Plan

(2) An ERP system should be capable of:

- ☐ A) Posting and tracking the detailed activities of a business
- ☐ B) Help users make intelligent judgments about how to run a business
- ☐ C) A or B
- ☐ D) A and B
- ☐ E) None of the above

(3) The scope of ERP applications extends to:

- ☐A) Accounting and finance
- ☐B) Human resources, sales and marketing, and manufacturing and logistics
- ☐C) Customer relationship management and cloud computing
- ☐D) A and B
- ☐E) All of the above

(4) Cash-to-cash cycle time is equal to:

- ☐A) Inventory days of supply - Days of sales outstanding + Average payment period for material
- ☐B) Inventory days of supply + Days of sales outstanding - Average payment period for material
- ☐C) Inventory days of supply - Days of sales outstanding + Average payment period for material
- ☐D) Inventory days of supply - Days of sales outstanding - Average payment period for material

(5) Internal supply chain of a manufacturing enterprise consists of all of the following except:

- ☐A) Procurement cycle
- ☐B) Marketing cycle
- ☐C) Sales and distribution cycle
- ☐D) Manufacturing cycle

12. What is the Enterprise Resource Planning?

Please identify in brief (no more than 2 sentences)

13: Did your rice mill use the Enterprise Resource Planning System in business?

☐Yes ☐NO

If you answer NO (N) in question 13 please go for section A but If you answer Yes (Y) in question 11 please go for section B.

SECTION A

About Technology adoption and Enterprise Resource Planning

Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
14: PEOU					
14.1 Feeling ease of use from other rice mills could influence our rice mill decision to use the ERP system or other advance system.					
14.2 It would be easy for me and team to become skillful at using highly systemic program.					
14.3 Our rice mill has the sufficient resources necessary to use the ERP system such as PC and internet support.					
14.4 Learning to operate the advance and systematic software is possibly easy for our rice mill.					
15: PU					
15.2 Using standard and highly systematic process could enables our rice mill to accomplish work tasks quickly.					
15.3 Using the ERP could increase productivity in rice mill operation.					
15.4 If our rice mill uses the ERP system, there will be more chances of getting a business competitive advantage.					
19: Use Intention					
19.1 Our rice mill intends to have rapid use of system like the ERP, once the program is proven efficiently.					
19.2 I predict that rice mill would use the new enterprise resource planning system in quick time after agreement is made.					
19.3 Our rice mill plans to use the new system in very soon after having satisfied with the system condition.					

Business Process Re-engineering					
Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
21: BPR					
21.1 Our rice mill could allow to spend long time in redesigning business processes before configuring the ERP use.					
21.2 Our rice mill is willing to standardize the business processes to fit the ERP system or better work system.					
21.3 Our rice mill will allow to adjust organizational process to accommodate the process built in the ERP.					
Training					
Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
22: TRA					
22.1 Training will substantially improve the level of staffs' understanding with the ERP intention					
22.2 Training give our rice mill staff's confidence in the new ERP system or other advance systems.					
22.4 Knowledgeable trainer can navigate through the well performing after training and inspire to use the program					
Government support					
Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
23: GOV					
23.1 Tax privilege and government incentives could inspire our rice mill to start using the ERP system or program.					
23.2 Providing information and service of ERP from government will result in attention of ERP use.					
23.3 Consistency in national support, especially in IT and technology, could affect investment of new system and program in the rice mill.					
23.4 Supportive government policy could be an importance to uncover the ERP opportunities for the rice mill industry.					

SECTION B

About Technology adoption and Enterprise Resource Planning

Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
14: PEOU					
14.1 Feeling ease of use from other rice mills could influence our rice mill decision to use the ERP system or other advance system.					
14.2 It would be easy for me and team to become skillful at using highly systemic program.					
14.3 Our rice mill has the sufficient resources necessary to use the ERP system such as PC and internet support.					
14.4 Learning to operate the advance and systematic software is possibly easy for our rice mill.					
15: PU					
15.2 Using standard and highly systematic process could enables our rice mill to accomplish work tasks quickly.					
15.3 Using the ERP could increase productivity in rice mill operation.					
15.4 If our rice mill uses the ERP system, there will be more chances of getting a business competitive advantage.					
19: Use Intention					
19.1 Our rice mill intends to have rapid use of system like the ERP, once the program is proven efficiently.					
19.2 I predict that rice mill would use the new enterprise resource planning system in quick time after agreement is made.					
19.3 Our rice mill plans to use the new system in very soon after having satisfied with the system condition.					
20: Behavioral Intention					
20.1 Our rice mill often uses the system to manage my task					
20.2 Our rice mill satisfied with my decision to use the system					

Business Process Re-engineering					
Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
21: BPR					
21.1 Our rice mill could allow to spend long time in redesigning business processes before configuring the ERP use.					
21.2 Our rice mill is willing to standardize the business processes to fit the ERP system or better work system.					
21.3 Our rice mill will allow to adjust organizational process to accommodate the process built in the ERP.					
Training					
Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
22: TRA					
22.1 Training will substantially improve the level of staffs' understanding with the ERP intention					
22.2 Training give our rice mill staff's confidence in the new ERP system or other advance systems.					
22.4 Knowledgeable trainer can navigate through the well performing after training and inspire to use the program					
Government support					
Statement	(1) Strongly Disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly Agree
23: GOV					
23.1 Tax privilege and government incentives could inspire our rice mill to start using the ERP system or program.					
23.2 Providing information and service of ERP from government will result in attention of ERP use.					
23.3 Consistency in national support, especially in IT and technology, could affect investment of new system and program in the rice mill.					
23.4 Supportive government policy could be an importance to uncover the ERP opportunities for the rice mill industry.					

Legal Status and Consequences Exploration: The Case of Non-Registered NGOs in Thailand

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Abstract

This study aims to analyze the reasons why some non-government organizations (NGOs) in Thailand are non-registered NGOs and what are the consequences. This multiple-case qualitative study analysis used in-depth and semi-structured interviews with key people from various NGOs to gather information. Also, to come up with suggestions, a focus-group discussion was held with experts. Based on the data gathered and the suggestions made during the interviews and the group discussion, it can be argued that NGOs' right and liberty to form a group should be maintained and protected. It is also suggested that the regulatory agency should be improved, most notably its ability to guide NGOs and enable non-registered ones to use their own discretion whether to register or not. As to the consequences of non-registration, findings indicate that the lack of official legal status primarily affects NGOs internal structure, human resources, funding, and project implementation. Further suggestions include among others appointing assistant managers, adding more personnel, building internal capacity for staff members, and developing the current expertise of organizations to conduct sustainable operations.

Keywords: non-registered NGO, legal status, funding, suggested solutions.

1. Introduction

There has been a large increase in the number of international and domestic non-government organizations (NGOs) in the last few decades. There also has been a trend toward NGOs' increasing involvement in the delivery of international development assistance. Several key factors have contributed to the rapid rise of NGOs. While numerous associations and mutual help groups emerged in the late 19th and early 20th centuries quite independent of government intervention, 'nonprofit,' 'non-governmental,' 'voluntary,' 'civil society,' 'third,' or 'independent' groups, now known popularly as NGOs, have become a topic of interest in the public discourse and influenced the enactment of laws to promote specific activities (Salamon, Anheier, List, Toepler, & Sokolowski, 1999). By 2007, China, for example, boasted approximately 3,000 such organizations, the majority located in eastern or central China. Many of these newborn NGOs, however, face major obstacles obtaining legal status, gaining funding, and resolving human resources issues. (Xin & Yang, 2014).

A number of studies suggest that 20th Century NGOs mostly took the role as outsiders challenging the system, while 21st Century NGOs have increasingly worked to be part of the system (e.g. SustainAbility, 2003). For new generation NGOs, the focus is on solutions delivered through (and often disrupting) markets. As a result, the NGO boom has led to a growing number of countries looking into providing a suitable legal framework allowing NGOs to thrive. The NGO context in Thailand refers to citizen organizations in a number of areas such as educational, health, economic and environmental issues. Currently, NGOs in Thailand are varied and seem to coexist quite well. A few, however, occasionally face unfriendly reactions from others in the country. Moreover, given Thailand's political situation, their space in society has become more limited (Prateapusanond, 2017). Many are registered as foundations, associations, or under some other forms of legal entities. Some, however, have opted to remain non-registered (informal). Thailand has no specific laws and regulations on the legal status of local NGOs and their certification.

Different ministries have drafted different regulations to certify, control, and monitor them, causing some confusion among NGOs. There is also no national mandate to cover their activities. This raises ambiguity in the establishment, executive authority, supervision, as well as budget management and administration among NGOs. Despite the absence of a clear-cut legal framework, many local NGOs have positively contributed to various local communities. Yet, a number of them cease operations only after a short period of time as, due to the complex societal environment, they face difficulty sustaining their operations. This is especially the case of informal or non-registered NGOs as a number of them have weak organizational administration and management. Only a few of them can sustainably thrive. Some are even forced to venture into under-the-table activities and end up being looked at with some suspicion. This has led the Thai government to limit the number of local NGOs and order the termination of some of them, mostly those violating national laws or becoming a 'security threat'.

To summarize, NGOs face three chief concerns: (i) the very existence of NGOs and whether they will eventually have to have a legal status; (ii) NGO's professional conduct and whether ethics is exercised properly; and (iii) NGO's funding and fund raising challenges and whether tax privileges will be maintained (Prateapusanond, 2017). For all these reasons, it is important to understand the reasons behind the decision of some NGOs in Thailand not to be registered and fully grasp the consequences of their non-registration, which is precisely what this article aims to do. Another purpose of this article is to suggest solutions on both the legal status of NGOs and on their organizational management and their remaining sustainable. More specifically, this research seeks to answer the following questions:

- What are the reasons for NGO's decision not to be registered?
- What are the consequences for local NGOs not to be registered?
- What suggestions can be made to improve the legal status and organizational management of non-registered NGOs?

It is the hope of the authors that the findings in this research will contribute to a better understanding of the nature of Thai NGOs, especially non-registered ones, and the betterment of their management. The results may provide policymakers with key pointers in providing policy support to newborn and existing local NGOs in Thailand.

2. Literature Review

After defining NGOs, this section focuses on articulating the elements of the conceptual framework used to analyze the consequences of the lack of official legal status, namely, the organizational structure, funding, human resources, and project-related operations.

- NGOs

The scope of NGOs is so diverse that it is almost impossible to find a single term to define them. Broadly speaking, NGOs are not-for-profit groups mostly formed by civil incorporation among like-minded individuals ((Bradsen & Pestoff, 2006). They are established with a clear purpose to achieve specific goals following some rules to regulate relationships between and among members and specific guidelines for the roles and responsibilities of each member (Weisbrod, 1988). The goals of NGOs are mostly different from other organizations and most generally work on development-related issues on the economy, society, or culture (Toepler & Salamon, 2003). A NGO can either be registered or non-registered depending on where it was formed or where it is operating. Moreover, NGOs can be small (groups or clubs) or large (foundations or associations) in scale, which may or may not complement government- or market-driven initiatives (Ruengrong, 1999).

Generally, NGOs assist to help society, deliver public service, or address social problems without seeking profit or any other benefits. Ruengrong (1999) further described formal NGOs as those established by a group of people who have the same ideology to do either social development, economic, or political activities such as the Center for Media Development and the Center for the Protection of Children's Rights. Salamon and Anheier (1998) determined that NGOs should meet five characteristics; they should be institutionalized, independent, non-profit, self-governing, and voluntarily participatory. In Thailand, NGOs can be classified into two different sets; NGOs formed by individuals with the same ideals and NGOs formed under the Thai legal framework. While the former is established by individuals who try to address societal issues that are not fully covered by public sector initiatives, the latter are government-back associations and foundations working on specific causes (Promgrid, 2008). The current Thai Civil and Commercial Codes have specific provisions for people who want to establish formal organizations.

- Traditional vs Modern NGOs

NGOs have become increasingly more influential, with some seemingly influencing governments and big businesses. This has pushed several countries to slowly try to gain control and monitor NGO activities. For instance, in 2012 a total of 1,727 NGOs were registered in Cambodia, consisting of 574 International NGOs and 1,153 Local NGOs (Cooperation Committee of Cambodia in 2012 cited in Narot, 2017). However, only 530 of these NGOs were known to be operational, with the remaining 80 NGOs being closed down (1,117 NGOs did not report their activities, which suggest they may not be fully operating or are simply not operating). Cambodia has recently adopted a law designed to regulate local NGOs. Proposed by Prime Minister Hun Sen, the law was seen to be necessary because without it, the government claims it would not know the sources of funding of NGOs, as some, it is argued may allegedly come from terrorist groups. For much the same reasons, Egyptian President Abdel Fattah el-Sisi also recently signed a law that restricts NGO operations. The law bans domestic NGOs or foreign groups from participating in activities that are harmful to national security, public order, and public morals (Najjar, 2017), leaving the door open to abusive bans.

Whereas NGOs used to act as outsiders, mostly separate from government work and operations, today, they tend to focus on providing solutions and working hand in hand with the public sector. NGOs thus can serve as a third party in ensuring government transparency and efficiency in service delivery. Table 1 highlights the main differences between 20th and 21st NGOs based on a comparative study conducted by SustainAbility in 2003).

Table 1: Differences between 20th and 21st Century NGOs (Adapted from Sustainability, 2003)

Issue	20th Century	21st Century	Comment
Status	Outsiders	Insiders	20th Century NGOs exist as outsiders to challenge the system, while 21st Century NGOs will be part of it dramatically.
Structure	Institutions	Networks	20th Century NGOs started small and then grew into major institutions. But 21st Century NGOs will invest heavily in networks
Funding	Guilt	Investment	20th Century NGOs' funding was filled by public anger or guilt, while 21st Century NGOs will aim to persuade supporters that they are good investments.

Even though the comparison was made almost 16 years ago, it remains valid today as the trends highlighted then have been confirmed and in some cases amplified (Thum, 2017). NGO formalization can change the parameters and yield enormous opportunities. However, if NGOs are not developed correctly, ignore the shifting parameters and cling to the past, they will expose themselves to fundamental risks that could threaten their very operation. Today, three key dimensions fundamentally affect NGOs' thinking: (i) the need to develop policies in a brand-new way to prevent the negative aspects of global developments; (ii) donors and the holistic social environment of the NGOs; and (iii) formal requirements for NGOs, especially regarding transparency, compliance, and the need for evidence regarding how they deal with money and the decisions resulting therefrom.

- Major Obstacles to NGO Legitimacy

In 2015, Mostashari investigated the challenges faced by Iranian NGOs. His study eventually divided them into three categories; internal, nationwide, and international.

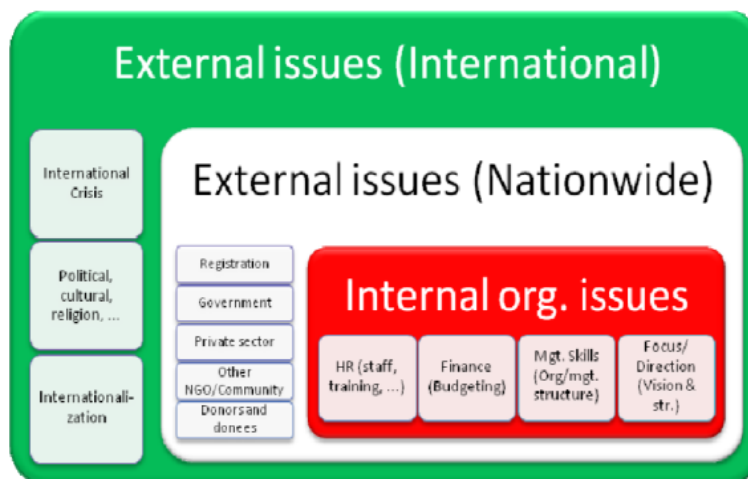
**Figure 1:** Internal and External Issues Challenging NGOs (Mostashari, 2015)

Figure 1 shows the impact of NGO legal registration on their organizational management. As Mostashari (2015) explained, NGOs face an array of problems if they are not registered, including a lack of resources (in particular administration and expertise), insecure funding, and weakness in gaining the trust of others, including that of donors.

As most NGOs face challenges in obtaining a legal status, many consequently face issues related to (i) their organizational structure, (ii) funding, (iii) human resources, and (iv) project-related operations. A major motivation for NGOs to officially register is for them to be able to open a bank account as a legal entity. It is quite difficult for NGOs to solicit funds without a legal status. In China, organizations can register as either companies or NGOs. This dual-regulation system is unique to Chinese NGOs as mandated by law. Local NGOs must register with the Department of Civil Affairs first. NGO's day-to-day activities will then be regularly monitored. According to Xin & Yang (2014), these restrictions make it difficult for NGOs to legally register. The legitimacy of NGOs is often questioned, with some debating whether NGOs "speak as the poor, with the poor, for the poor, or about the poor?" Slim (2002) defines the legal status and legitimacy of NGO as "the particular status with which an organization is imbued and perceived at any given time that enables it to operate with the general consent of peoples, governments, companies and non-state groups around the world" (p. 21).

NGOs' motivations are derived from morality and law. Slim (2002) argues that here is no need to register their legal status. To experts, legitimacy can be based on the organization's moral and legal motivation, membership base, technical expertise, and/or effective performance. Some NGOs feel that a membership-based organization operating in an openly democratic society wholly defines their legitimacy. However, when there are weak legal and regulatory structures, some sort of certification schemes and self-regulation of NGOs may emerge to provide this legitimacy. A good example is the Philippines Council for NGO Certification (SustainAbility, 2003). NGOs' legitimacy can thus be both derived and generated.

(i) Organizational Structure

An organizational structure gives a pictorial representation of the functional mechanisms inside an NGO. It provides a graphic view of the hierarchical system and the levels of responsibility in the organization. It is relevant to present an organizational chart because it gives a quick, bird's-eye view of the management structure of an NGO.

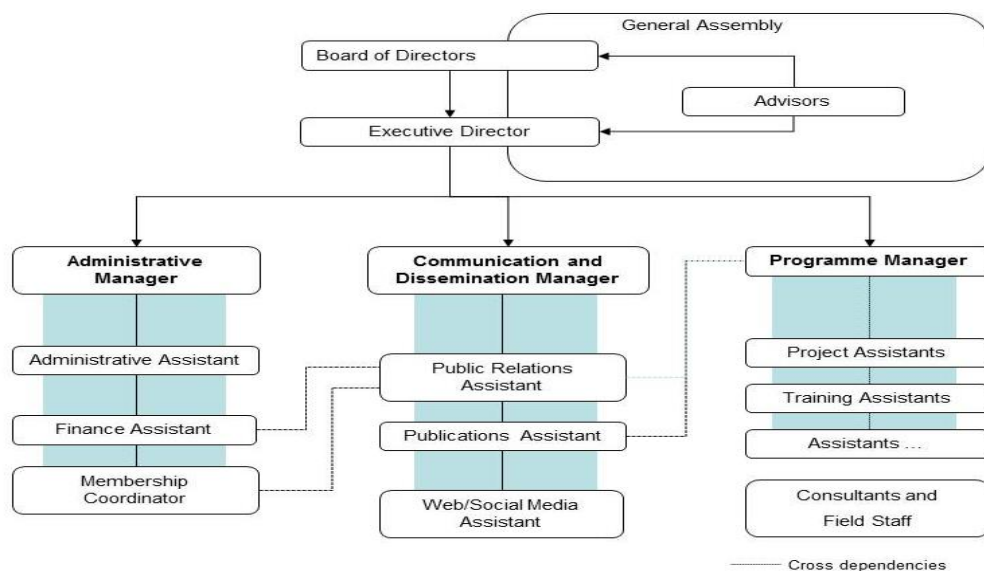


Figure 2: Typical Structure of NGO Formalization (Srinivas, 2015)

The organizational structure of an NGO is mostly found in annual reports, brochures, and other promotional material of the organization as it is essential for raising funds and gaining donor recognition. The top management of an NGO consists of three entities; (i) the Board of Directors, (ii) the General Assembly, and (iii) the Executive Director. Staff members are divided into two levels: managers and operators. In terms of functions, staff members fall into three groups (i) administration, (ii) publicity, and (iii) programs/projects. Formalizing the organization can take between 15-20 staff members. In the case of large NGOs, the fund-raising responsibility may fall under a separate position specifically to embrace new purposes as defined by the vision and mission of these NGOs (Srinivas, 2015).

(ii) Funding

There are four major sources of funding available to NGOs: (i) international and domestic foundations, (ii) donations, (iii) corporate sponsorship, and (iv) membership fees. Funding is a classical problem issue for grassroots organizations (Xin & Yang, 2014). International and domestic foundations are usually the main sources of income for many NGOs. Xin & Yang (2014) suggest that more than 90 percent of Chinese NGOs' funding comes from international sources. Chinese government officials and some researchers are suspicious of this type of funding, as they assume that the international foundations involved will control programs or push their agendas with the donor recipient. Certain individuals and enterprises can make donations to NGOs, but only those that are registered are permitted to charge membership fees. Corporate sponsorship is also an option, but the general public often does not trust corporations and suspects that these NGOs are engaged with under-the-table activities. Political and administrative sectors are also seen as interrupting and limiting NGO funding. Both international and domestic foundations tend to support government-backed NGOs (GONGOs) rather than grassroots NGOs, which are sometimes characterized as weak. Donors often prefer to support GONGOs or governmental agencies, which are very likely to offer more benefits (Xin & Yang, 2014).

(iii) Human Resources

The third major challenge many NGOs face is their limited human resource capacity. According to the NGO Blue Book (2014), in China, about 81 percent of the country's NGOs lacked professional employees and 46 percent had fewer than five employees. Moreover, most NGOs have also suffered a high turnover rate. Even though their leaders are usually competent, their general staff often lack some essential capacity. As a result, while many NGOs seek out suitable projects, limited human resources capacity often leads to poor project implementation. Senior NGO officers end up trying to pick up the pieces, with many performing tasks that should be the responsibility of the general staff. The solution is to recruit more employees but this requires additional funding. To gain more funds, the organization needs to identify and implement more quality projects. This vicious cycle is faced by many NGOs today (Xin & Yang, 2014).

(iv) Project Implementation

The general goals and directions of Thai NGOs in implementing projects cover the following principles:

NGOs must:

- a) adhere to the idea that sustainable development is for all Thais;
- b) raise awareness to encourage public participation in developing the country;
- c) motivate Thais to actively engage in all dimensions of development by focusing on human resources and network development, which will result in self-reliance and the ability to help society;
- d) promote an equal society by paying more attention to the more vulnerable sectors of society;

- e) put in place mechanisms that would be beneficial to all, including having freedom to make decisions.

However, many Thai NGOs have decided not to register, which brings into a focus a number of issues may hinder project implementation, their funding, human resources, and structure.

- Global and Local Trends for Non-registered NGOs

There are many reasons why, for example, NGOs in India register even if they may operate without any legal status. Often, these organizations register to ensure accountability and easier use of assets. Moreover, registered NGOs typically can formally receive funds in the name of the organization (NGOs in India, 2016).

In South Korea, a large number of NGOs are not registered. There are an estimated 11,050 non-registered organizations, accounting for 18 percent of all NGOs in the country (Kim & Hwang, 2002). Of these, about 4,000 non-registered organizations are active NGOs. The high number of unregistered NGOs is a distinctive feature of South Korean NGO management. Kim and Hwang (2002) suggest that non-registered NGOs are centered on advocacy and civic organizations, while registered NGOs are centered on providing service. This estimate, however, is based on a broader definition of NGOs which includes nongovernmental, public interest corporations, civic organizations, civil society organizations, and civil movement organizations. But this estimate did not include hospitals and educational institutions (Bokgyo Jeong, 2015).

In China, new NGOs faced difficulty to register. Many NGO leaders choose other ways of establishing their organizations. Until the adoption of the new regulations for NGOs in 1998, one of the most popular strategies was to register with the Bureau of Industry and Commerce as a business enterprise. This was seen to be easier than registering as a social organization as it required a minimal management structure with a high degree of autonomy.

In Thailand, many groups have been established for specific purposes but do not have any legal standing. Such organizations are known as projects for working groups, units, and forums. Recent surveys by the National Statistical Office in 2018 estimate that there is a total of 76,685 NGOs in the country. However, data were not disaggregated into registered and non-registered NGOs (CUSRI, 2003). More reliable data are those released by the Chulalongkorn University Social Research Institute (CUSRI), which came up with a baseline data for unregistered NGOs in the country (they are shown in Table 2). At present, the NGO situation in Thailand is quite unique, relatively open, and a free environment for NGOs. While enabling mechanisms have been put in place to push NGOs to legally exist, there is still a high number of non-registered organizations in the country. These data underscore why understanding the root cause and eventual effects of NGO's non-registration is important. This study hopes to offer solutions about the views and suggestions of the relevant government department on NGO legal status requirement and help the non-registered NGOs to continue to harmoniously thrive in the Thai society.

Table 2: Total Number of Registered and Non-registered NGOs in Thailand (CUSRI, 2003)

Type	Total Number
Registered NGOs (Foundation & Association)	8,406
Non-registered NGOs	
• Thai NGOs	68
• Foreign NGOs	429

3. Research Methodology

As shown in Figure 3, this study aims to understand the reasons why some NGOs are not registered and the consequences on their organizational management and operations in terms of structure, human resources, funding, and project implementation.

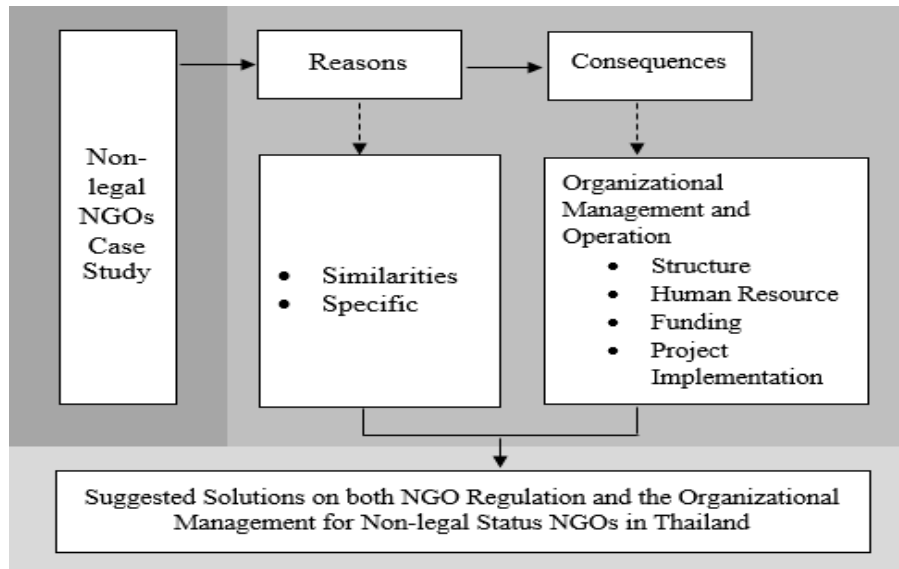


Figure 3: Conceptual Framework

To achieve these goals, this study uses a qualitative method. Five non-registered NGOs in Thailand were chosen for this case study. To be eligible they have to:

- (a) be active or have been established for more than five years;
- (b) have an existing office in Thailand; and
- (c) publish information on the Internet or in an annual report.

This research applies the multiple-case experience (Dechalert, 2002). The authors selected a diverse range of organizations. Based on their specific focus, CUSRI (2003) has identified 11 types: culture and recreation, education and research, health, social services, environmental, rural and urban development, law campaign, and politics, charity and funding, international activities, religion, professional organization. As indicated in Table 3, the five NGOs selected cover many of these types and embrace various projects/activities. For obvious strategic reasons, the identity of the sampled NGOs was not fully disclosed (they are referred to by a letter).

Table 3: Basic Information on Selected Non-registered NGOs in Thailand

Name	Year Founded	Aspect	Type	Staff Number	Projects/Activities
NGO A	2002	Social Service	Thai/Local NGO	7	Drug prevention by using alternative activities for the youth to spend their free time more effectively, gain leadership skills, and encourage them to be community volunteers
NGO B	1994	Education and Research	Thai/Local NGO	5	Community and social development through arts and culture activities as well as training and research
NGO C	2010	Law Campaign and Policy	Foreign NGO	7	Promote civic education and democracy; organize an international forum on democracy, human right, and civic education; and build a network for international youth democracy
NGO D	2007	Culture and Recreation	Foreign NGO	7	Children and youth, environmental education, community, and rural development
NGO E	2006	Environment	Thai/Local NGO	5	Encourage individuals, organizations and communities to be self-reliant by organizing workshops through a participatory learning process; research, gather, and experiment with the knowledge of building a home with natural materials and build a house with both domestic and foreign soil; disseminate information about natural architecture and building a house with clay; organize discussion and exchange knowledge to develop mutual knowledge; and build a house builder network with clay to create a knowledge exchange community

Given the authors' lack of connections with non-registered NGOs in Thailand, the availability of key interviewees was a primary priority. To this end, the snowball technique was used to find available non-registered NGOs that were willing to share relevant information. All the cases NGO from the snowball technique are small. To ensure reliability, the target NGOs also had to comply with the various characteristics outlined by Salamon and Anheier (1998) as mentioned in the previous section. As part of the qualitative method, in-depth and semi-structured interviews with members of these NGOs were conducted to determine their reasons for having no legal status. The topics covered include the organizational structure, human resource, fundraising, and project implementation of NGOs as expounded in the literature review.

More specifically, four face-to-face interviews were conducted and a telephone interview was used in a fifth case as one interviewee was outside the country during the data collection period. The semi-structured interviews were transcribed and analyzed. Moreover, a focus group discussion was held to come up with solutions. The group discussion includes NGO experts and consultants, NGOs Co-ordination Committee on Rural Development (NGO-CORD), as well as managers from both registered and non-registered NGOs in Thailand. Further information was collected from different reports provided by the interviewees.

4. Results and Suggestions

This section first discusses the results of this research study and then makes suggestions on the basis of these findings.

- Intention of Remaining Non-Registered NGOs in Thailand

Table 4 summarizes the intentions of the sampled NGOs not to register as legal organizations in the country and the reasons for it. As the table shows, the most common barriers are related

to the country's laws and regulations, registration processes, as well as regular reporting and commitment to the government.

Table 4: Common Barriers and Specific Reasons for Selected Non-Registered NGOs in Thailand.

Common Barriers	Specific Reasons
Complex laws and regulations	NGOs registered in other countries already; some international NGOs are registered in English-speaking countries like the Philippines or Singapore
Complicated registration systems	NGOs working on highly contentious issues (i.e., politics, democracy, human rights, etc.)
Expensive registration fees	Some NGOs are subsidiaries or local offices of registered organization or international NGOs
Fear of excessive government control	Some organizations do not see the value of registering, especially considering possible government involvement in activities
Regular monitoring of the government	Most NGOs in the country are temporary in nature

As explained earlier, to provide workable solutions for non-registered NGOs, the study looked into the impact of non-registration on four different organizational aspects: (i) management structure, (ii) human resources, (iii) funding, and (iv) project implementation. Each aspect is discussed next, starting with the organizational structure.

(i) Organizational Structure

As Table 5 shows, all sampled non-registered NGOs have a similar structure in terms of size and hierarchy. The names of the positions held in the NGO though depend on the NGO type. For example, for a training organization, staff members are often called consultants or assistant consultants. But for rural development organization directly working with communities, officials are called field coordinators (such as NGO-D).

Table 5: Structure of Selected Non-registered NGOs in Thailand.

NGO	Size	Staff Number	Hierarchy
NGO A	Small	7	2 levels (manager and staff)
NGO B		5	2 levels (manager and consultant)
NGO C		7	2 levels (president and committees)
NGO D		7	2 levels (manager and field coordinator)
NGO E		5	2 levels (director and field coordinator)

When compared to the typical structure of NGO formalization as shown in Figure 3 (discussed in Section 2), these sampled non-registered NGOs offer positions at a lower level with no distinct separate responsibilities. A previous study of 21 NGOs in North Eastern Thailand defined an organization size as follows: small (1-10 persons), medium (11-20 persons), and large (20+ persons). Apart from their size, one issue faced by these sampled NGOs may be their lack of legal status (McQuistan, 1998). Another may be related to the length or sustainability of their projects and/or activities as their ability to live and exist continuously is one of the factors likely to affect the flexibility of their structures.

As a key interviewee stated:

It is sometimes difficult to have only one [project] manager. The general staff employees cannot directly negotiate with or work with donors and other supporters. When projects expand in scale or impact, they require more assistance or administrative support. Only one project manager is not enough for coordination, sometimes we are forced to lessen the number of activities to suit the size of the organization." (NGO-E).

Another limitation to the organizational growth of these sampled non-registered NGOs is their flat structure or the limited number of staff members. These organizations should work on building their resource base to further thrive.

(ii) Human Resources

For non-registered NGOs to survive, the following human resource management points need to be taken into account. First, the sampled NGOs related that while their organizations are small, they provide generous compensation and promotion packages, as well as grants to loyal and honest employees. Some, employee benefits provided are comparable to and competitive with those offered by big private companies. Second, these non-registered NGOs have encouraged their employees to develop their knowledge and skills. Since most NGOs interviewed are involved in knowledge generation and provision, it is necessary for employees to be highly knowledgeable and skilled to be able to transfer this knowledge to others. Though small, all the NGO teams sampled in this study are comparatively competent and loyal to their respective organizations. Third, the turnover rate of all the sampled NGOs is low.

All the employees of the NGOs sampled NGOs have been working since the organizations' establishment. Even though during the interview, no statistical graph of the turnover rate was provided, a number of reasons can account for the low turnover. As one of the interviewees explained, "While it would be better to keep increasing staff members, when analyzing the existing tasks and the number of projects, it is better to stabilize the staff ratio and motivate employees through organizational welfare and salary instead" (NGO-C respondent). The preference for status quo was corroborated by another respondent who stated: "Our organization started with a little number staffs, until today, we still have the same number with the same persons" (NGO-D respondent).

However, while generally competent, staff members of non-registered NGOs still face challenges that are apt to undermine their efficiency of the human capital. One interviewee shared that sometimes there are conflict and/or competition among staff members. This is sometimes due to the small number of employees where some are forced to handle multiple responsibilities or activities. As this respondent explained, "[The organizations' management] need to ensure that everybody inside the organization is on the same page" (NGO-B respondent). Thus, in addition, given the small size of the sampled organizations, project managers or higher level officers must be skillful in mediating conflicts. So much so, that one of the sampled organizations (NGO-E) hired a human resource specialist who can mediate or address internal issues.

(iii) Funding

All the sampled non-registered NGOs have consistent funding sources, most of them being the organizations' main donors and key sponsors. There might be, however, some variations in annual funding depending on the nature of the projects and activities. All five sampled NGOs also emphasized that their organization can always ask and negotiate with donors and sponsors to sustainably support their organizations. They are in close touch with their donors and stakeholders. One of the sampled organizations (NGO-A) also pointed out that they can always negotiate with clients and donors to present project achievements and results and possibly

obtain more funds. The five non-registered NGOs mentioned that over the past three years their funding has been increasing due to several reasons. First, many private companies are becoming more interested in corporate social responsibility (CSR)-related activities to attract higher public interest or recognition (enhancing their image). Second, there has been stronger collaboration among registered and non-registered organizations recently as a way to lessen project implementation costs and strengthen their capacity to thrive amidst volatile markets. Finally, these NGOs have garnered stronger public support as a result of wider media coverage, especially through social media. More and more people are interested to join different social activities without being too concerned with the organization's background and objectives. For example, Educational Loan Funds Tied to Future Revenue or Income Contingent Loan (ICL) are provided by the Thai government to students who need to pay tuition fees. Available since 1996, this loan, however, requires borrowers to participate in volunteer activities to collect social activities hours.

Future borrowers are required to show evidence of activity per semester (not less than 18 hours per semester). Such funds contribute to the stronger public participation in social activities, including those implemented by non-registered NGOs. That said, raising funds has always been a major concern for development organizations. As one respondent explained, this is more difficult for non-registered NGOs: "A limitation in fundraising is the organization's reputation. When submitting new proposals, we are always asked, especially by new donors, about our background, our experience in implementing projects, etc. Some proposals are immediately accepted or rejected, while others undergo longer review." (NGO-D respondent). A vast majority of non-registered NGOs are still donor-dependent. This poses a challenge especially in ensuring the sustainability of projects and even of the organization's very existence.

(iv) Project Implementation

Table 6 provides an overview of the projects implemented by the NGOs sampled in this study.

Table 6: Overview of Project Characteristics among Selected Non-registered NGOs in Thailand.

NGO	No. of Staff Members	No. of Projects	Activity and Project Characteristics
NGO A	7	3	<ul style="list-style-type: none"> - Youth development camp - Social service - School training
NGO B	5	3	<ul style="list-style-type: none"> - Social service activity for the elderly, youth, and other disadvantaged people - Forum, conference, and seminar organization - Country development, government policy, etc. - In-house training
NGO C	7	3	<ul style="list-style-type: none"> - Mission and visits to several countries - Conference and workshop - Internship and training
NGO D	7	2	<ul style="list-style-type: none"> - Long-term camps and short-term events - Seminars and training
NGO E	5	2	<ul style="list-style-type: none"> - Social service activities - Environmental training

As indicated in Table 6, most of these NGOs are involved in organizing training, conferences, or seminars. In addition, the number of projects handled by each organization is lower than the number of staff members each NGOs has. Information gathered from the interviewees highlight some of the challenges faced by non-registered NGOs in terms of project implementation. For one, gathering stronger public participation in most social activities remains a challenge. Some think that these groups organize activities to gain benefits.

One of the selected NGOs related that this is the reason why they do not publicly disclose the fact that they are backed up by a political party. On respondent further related that they run projects hoping that the public will be open to learn about democracy and civic education. Gathering public support remains one of the most pressing issues these sampled groups face. This is all the more the case as these NGOs and their social activities are also often compared with more established organizations, private companies, and even government agencies. This adds another layer of risk to the success of these non-registered NGOs.

- Legal Registration of NGOs in Thailand

After the authors reported the findings from the cases, the focus group discussion outlined the advantages and disadvantages of being a non-registered NGO in Thailand. The pros and cons are as follows:

Pros: It is everyone's liberty to unite and form any type of group especially an NGO. An NGO is basically a group of people who aim to dedicate good things for the society without making a profit. So, why should the law prohibit them? The legal requirement to register means, in itself, that the group of people is prohibited to form a group to do a good thing unless they have registered. The requirement to register means additional costs and time away from an NGO to run its activities. This might discourage small NGOs. Although there is no legal requirement to register every NGO, many other laws govern the activities of non-registered NGOs (criminal, civil, commercial, etc).

Cons: There are many NGOs running their activities inappropriately, especially non-registered NGOs. Some of them have good intentions but lack the appropriate knowledge in that field. Some NGOs just only motivate people to disagree with any government project without proper specific consultations and/or sound scientific evidence. Some of them are used as a tool for money laundering. Some NGOs even defraud money from donors without providing any pro bono activities. These NGOs cause more problems instead of offering solutions. NGOs must be required to register and to their regulation facilitated so as to prevent misconducts. This debate about the pros and cons leads to the following suggestions:

- Suggestions Related to Laws and Regulations on Remaining Non-registered

The group discussion finally came up with some suggestions about maintaining the non-legal status of NGOs in Thailand. It also made some recommendations as to how the Thai government can control and monitor NGO operations. Based on the conclusions of the group discussion, the following should therefore be done:

- a) The Government should rely on criminal, civil, and commercial laws to avoid the complexity and complications of having to register NGOs, especially if they are already registered elsewhere.
- b) The right and liberty to form a group should remain unchanged. The State should not require every NGO to register but must incentivize the registration. Non-registered NGOs should be able to register at their own discretion.
- c) Non-registered NGOs should be strictly prohibited from using names such as foundation or association, which might mislead people in believing that they are legitimate non-profit organizations.

- d) NGOs' public awareness should be promoted to prevent misunderstanding particularly with regard to contentious issues.
- e) The regulatory agency needs to improve its efficiency of financial audit and the time it takes to regulate NGOs.
- f) An official identification card should be issued and officials should be permitted to inspect NGO operations at least once a year (the assigned officials must inform the NGO prior to inspection).
- g) The inspection must ensure that the NGO follows the objectives set out in the regulations. Proper accounting of receipts and balance sheet expenditures verified by a certified accountant must be issued even in the case of temporary settlements.
- h) Any violation should result in the suspension of operation for 2 years or more.

- Suggestions Related to Organizational Management

Table 7 summarizes important experiences reported by interviewees and addressed in the focus group discussion. The recommendations listed in that table to overcome the shortcoming of non-registered NGOs are based on experiences by sampled non-registered NGOs and the brainstorming of experts in the group discussion. Given that some of the sampled NGOs have quite similar problems, some issues have already been solved by others' experience already. Based on the interviews, the following suggestions can be made:

Table 7: Summary of the Impact on Organization Management and Suggested Solutions.

Dimension	Internal Organization Management Consequences	Guideline Solutions
Organizational Structure	The difficulty of having only one manager or project manager to negotiate with many donors and sponsors	Appointing assistant manager(s) to assist in coordinating with donors
		Adding additional staff members to support project implementation and ensure proper monitoring and coordination with donors, partners, etc.
Human Resources	Internal conflicts because of multiple responsibilities while both the staff and the organization is small	Building the capacity of staff members would be beneficial for the organization in the long run
		Hiring a human resource specialist or training project managers who can mediate or address internal issues
Funding	Limited funding opportunities	Building up the organization's reputation and recognition by joining social events and activities hosted by others.
	Lack of clout to negotiate with registered NGOs, donors, and sponsors for funding and resources.	Building the organization's capacity for self-sufficiency
Project implementation	Lack of public support/recognition	Joining local events such as traditional celebrations, religious festivals, etc.
	Strict competition/comparison with more established organizations	Identifying, honing, and promoting the organization's own expertise

5. Conclusion

The findings in this study indicate that there are two main reasons why a number of NGOs in Thailand opt not to register. First, the legal and institutional framework related to NGO registration in the country is weak. At the moment, there is no single authority mandated to facilitate registration or monitor NGO operations. Furthermore, most organizations find the current set of requirements too complex. Another major reason why some NGOs fail to register is due to the temporary nature of the activities implemented by these groups. Since most of the non-registered NGOs are small in scale, the long process, high fees, and unclear benefits to legally register remain key barriers.

To address these issues, the government must look for ways to better improve the existing related laws and the regulatory agency to improve the registration process, the organization's name, financial auditing, and perhaps incentivize the registration of non-registered NGOs. At the same time, these organizations' right and liberty to form a group should continue to be protected. At best, local governments must enable these local NGOs organizations to use their own discretion whether to register. Moreover, they should also issue the license for NGO inspectors properly.

Also highlighted in this study was the impact of the non-registered status of selected NGOs in Thailand. Among the parameters investigated were the impact on the organizational structure, human resources, and funding, and project implementation. Regarding the organizational structure, one impact is the difficulty of having only one manager to negotiate with many donors and sponsors. The solution for this is to appoint an assistant manager or add more personnel to facilitate closer coordination and the monitoring of project achievements.

As for human resources, a salient challenge is an internal conflict from multiple responsibilities while small scale staff and organizations. A possible solution would be for the organization to build internal capacity and provide opportunities for staff members to widen their horizons. These organizations can also explore improving staff's capacity to handle or address internal conflicts. With regard to funding, non-registered NGOs should explore expanding their network and capitalizing on building partnerships with like-minded individuals or other relevant organizations. Lastly, non-registered NGOs must focus on finding their niche and building on their current expertise. This would help to better position NGOs for future collaboration with other organizations.

- Future Research and Limitations

There are several limitations conducting this research. Firstly, since non-registered NGOs are not allowed to reveal their names, it further impacts their reputation and trust for fundraising purposes. Secondly, the organization size in all the cases is small, due to the limits of the authors' connections. The authors could only find small organizations from which to collect data. Research emphasizing big NGOs might also provide different conclusions. Thus, future research should cover all aspects of NGOs management in Thailand and include both registered and non-registered ones. It should also include a study on the legal status intention and the consequences for suggesting a holistic solution. Also of great import, all size NGOs (small-medium-large) should be studied in order to recognize the similarities and differences in their implementation.

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Factors in Developing Online and Social Media for Marketing Local Silk & Cotton Products

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Abstract

This study explores a number of factors critical to the development of an online site and the use of social media as part of promoting local silk and cotton merchandise made by small entrepreneurs located in northern Thailand. SWOT and TOWS analyses were conducted to determine the areas directly related to the successful development of online marketing and sales. Data were collected through interviews, group discussions, informal conversations, and a training seminar. The findings indicate that developing the staff's knowledge of marketing, public relations, and online sales, and use social media was critical, which requires organizing, training and educating the personnel and possibly designing or creating new silk products. It was also found that another important step was to significantly reduce the products that are not so popular and improve the distribution of those that sell well. The study further recommends that the willingness and collaboration of group members be encouraged as progress largely depends on their cooperation.

Keywords: Entrepreneur network, marketing, online, social media, strategy, SWOT/TOWS analysis

1. Introduction

For small entrepreneurs from the northern region of Thailand, who are solely promoting local products made out of silk and cotton such as cottoning and handbags, increasing sales is pivotal to their business' long term survival and growth (Hajli et al., 2017). In raising the interest of targeted customers to make purchases, the key factor is how their items are marketed on social media before they are displayed in markets (Ozawaa, Sekiguchib, and Tsuda, 2017). They do know that online marketing has become a significant factor in the consumption pattern of the new generations of consumers (Shannon Cummins et al, 2014). The key factor for these small entrepreneurs seems to be getting full cooperation from all those who share the same interest in adapting to the changes in the market and developing the reputation of the products from this Northern province (Mehmet and Clark, 2016). An initiative aiming to establish an online and social media entrepreneurial network that would help to promote these handmade items is in the planning. However, while people have been using the internet as a useful shopping tool to serve their own needs (Yi Jin Lim et al., 2016) all the while, entrepreneurs have been facing obstacles in getting their business online (Lena Olaison, 2014). Silk products from Lamphun and cotton products from Chiang Mai are similar handmade crafts from Northern Thailand. The similarities include the methods of production, and GI product conditions and the characteristics of the products and entrepreneurs.

Given all these common points, the proposed solution is to develop the products' marketing together. The idea is to get a diversified online distribution channel so that the products be highly exposed in the market and recognized thanks this public relations initiative. There are also high hopes that those involved in the project will acquire the knowledge and understanding of the market through the applications within social media to keep the initiative thriving for the long term and be in control of the decision making process with regard to marketing.

- Statement of the Problem

The selling of local silk- and cotton-made products has always relied on finding a location or a space at tourist sites, local markets, or outdoor events to showcase the goods in the hope that customers would be interested in buying some as souvenirs or for personal use. In this digital age, when information has to be in real time the question asked is: "how does one get local hand-made products, which have been around for years, to capture the interest of people who spend much of their time on online sites and social media?" Online sites used for marketing products communicate a message that hints on the added value to one's lifestyle by linking all the positive points to the big picture for the targeted customers (Lacoste, 2016). With a social media site used for public relations, customers could gain access to the merchandise while business owners could make use of the database for information that would enable them to develop better ways of promoting their goods (Hempelmann and Engelen, 2015).

With the integration of public comments, items most recently bought, accessories rarely purchased, backgrounds of individuals taking an interest in the commodities, and best practices in customer service on the part of other entrepreneurs, the social media site could become a knowledge and learning tool for developing many approaches in promoting the silk and cotton merchandise. However, an ongoing contribution to the social media site requires a number of factors to be taken into consideration. For one, there must be strong support from the users and they must have confidence in the participation (Gordon, 2013). While the idea of getting the local products marketed and promoted through an online site and social media may be an exciting endeavor, a number of issues need to be raised for consideration before things get fully launched. First, the operation internal and external sources will need to be assessed for an analysis of where the advantages reside and what certain factors need in terms of improvement.

- Research, Aims and Questions

The aim of this study is to explore a number of factors involved in the development of an online site that aims to promote local silk- and cotton-made merchandise on behalf of small entrepreneurs located in the northern region of Thailand. To this end, the following questions are formulated:

1. What needs to be considered in developing a more diversified online distribution channel?
2. What needs to be considered in developing a social media, a web site and a database for public relations purposes and for the promotion of merchandise?
3. What needs to be considered in developing marketing skills via social media and applying the know-how to oneself?

2. Literature Review

- *Diversified Online Distribution Channels*

Consumers are spending more time online with their mobile devices searching through social media and website for contents that are relevant to their interests and benefits (Purcareaa, Gheorghea, and Gheorghe, 2015). There are therefore more opportunities for reaching out to them. Even if sales have not been generated at an expected high volume the products, services, or ideas that have a unique brand appeal need to be constantly exposed in the daily events and lives of people in order to be more likely remembered (Csikósová, Antošová and Čulková, 2014). Relying on one traditional form, such as advertising, to grab the attention of potential buyers is limited in hope, while doing nothing at all to change the way for improvements can threaten the financial health of the business as well. A distribution channel is composed of a network which needs to be configured precisely for the purpose of getting the finished product from the manufacturer into the hands of the end user.

With an online distribution channel the organizations and key agents that make up the network need to be viewed in a holistic manner so that it keeps the producer aware of how communication is being carried out among members and the decisive actions taken to complete a mission (Lia, Laia, Lin A, 2017). The most important thing is to be assured that the stakeholders within the online network are functioning together in a cohesive effort to provide a high level of satisfaction with the services to customers (Key and Czaplewski, 2017). The more people are working in unison, the greater the strength there is as a resource for achievement. Diversifying an online distribution channel happens when customers have more positive things to say about a product and services and go to the extent of highlighting the values which other individuals share in the same mind set (Notta and Vlachvei, 2015). Despite other worldly events that are occurring each day and are beyond people's control, an online distribution channel that is built on a strong reputation for complete customer satisfaction will truly gain their trust.

- *Social Media, Web Site, and Database for Public Relations and the Promotion of Merchandise*

With the popularity of social media, which are used globally, there are some new marketing opportunities to be put into practice and new challenges to face in order to stay competitive (Wu, Fanb and Zhao, 2018). Idealistic contents conjured in the minds of people have to be carefully planned out in alignment with other acting agents who are experts in their own field and can fortify the message (Melancon and Dalakas, 2018). Reaching the target group in hopes that they will embrace the message requires a firm partnership with bloggers, social media influencers, celebrities or key important public/social figures to communicate it in the most effective manner (Tsiakis, 2012). This is where a small business owner can leverage the strengths of others as an opportunity in building public relations and promoting the merchandise.

However, the fact of the matter is that whatever the customers are thinking and are about to do can sometimes go beyond the control of what the business owners would like for it to be. This becomes a real threat when the negative comments become viral and have the potential to damage the image of the business. The tools for public relations and for promoting the merchandise serve as an opportunity for small business owners to develop a sound relationship with their customers, employees, communities, and other stakeholders (Akdoğan and Altuntaş, 2015). New communication channels open up possibilities through

getting engaged with customers more directly. The platform that allows customers to voice express their viewpoints toward other buyers and with the business serves as a valuable device for entrepreneurs to understand how the product or service is making an impact on their lives as well as providing the opportunity in gauging for more information that can help them improve their business (Thakur, 2018). The only way of making social media, website, and database work effectively and efficiently for one's business is to be assured that everyone working within the business has a thoroughly solid understanding of the market and the customers; otherwise the results will become frustrating.

- Knowledge of Marketing via Social Media for Applying Know-How

Social media marketing itself is composed of a complex arrays of networks. While individual units seek to satisfy their own demands and needs and thus define their own principle of tactics and applications, this cannot be exclusively managed by the trading partner (Geng, Li, Qu, and Chen, 2017). Although this could be a threat in the collaboration network, the importance is to get an assured sign of trust in doing the business together online. Small business owners must set a specialized team to watch over how the patterns of interaction and reaction is demonstrated in an ebb and flow fashion in order to get the proper decisive actions implemented for sustaining the digital communication channels in being productive with the end users (Troxler and Wolf, 2017). There is no guarantee that the social media tools will solve the problems and challenges that can arise in the business transactions. Still, those who play an important role in aiming for customer satisfaction and excellence in service may need to take on a firmer proactive approach in getting the structural system of individuals to work together in a cross-functional fashion (Haryani and Motwani, 2015).

Certain standards have to be agreed upon in advance so that there is no second guessing on what the other side of the partnership might do as this could lead to undesirable consequences. It is through the customer journey and those who give a heap of praises for the services that insight on where the business can build on its brand name can be acquired (Dong and Li, 2018). Creativity and innovation should always be welcomed for the purpose of complying with the changes in customers' preference and determining the competence and capacity for strengthening the business' ability in staying competitive in its market. What are deemed as weaknesses in the working system can also be presented as an awareness to be brought into for discussion and for seeking better ways to get individuals to integrate and assist in reconfiguring out ways of developing the social media tools for expanding the market (Smith, Smitha and Shaw, 2017).

3. Methodology

Before the online and social media system can be set up, the internal and external factors for design that would allow for the members involved in the network to build up the confidence and mastery of the operation must be considered. This study focuses on small entrepreneurs who are in the retailing business and sell silk crafted and cotton made items for ladies and men. The products range from personal accessories such as handbags, wallets, knapsacks, shirts, jackets, and pants to household items such as tablecloth, rugs, and window drapes. These entrepreneurs are located in the northern region of Thailand. Four conduct business in the Khammao Tha Sing town district of Lamphun and seven sell these products in the district of Mae Chaem, Chiangmai. Lamphun silk and Chiangmai cotton products are famous handicrafts throughout the country for their beautiful patterns (they are also durable and comfortable to wear).

Both lines of products have the same origins and characteristics (GI products). The entrepreneurs are people living in the northern region of Thailand who share the same local values with each other. The products and entrepreneurs are therefore the samples in this research. Purposive sampling was used in selecting the groups for this research. The selection was based on the following criteria:

1. Being authorized as the official operator and having met the GI criteria mark.
2. Identified as a local entrepreneur engaged in trading silk with a minimum of five-year experience.

The selected groups were composed of four entrepreneurs based in the Lamphun province engaged in the trade of promoting silk items and seven entrepreneurs from the Chiang Mai province in the business of selling hand-woven cotton fabrics. Each of these entrepreneurs only had two staff members working alongside with them.

The collection of data was done as follows:

1. *Interviews and Group Discussions* – The work began by setting up a separate interview to meet all of the entrepreneurs and their staff at their local stores. After obtaining permission from the owners to have a group discussion with their staff members, the same questions were asked about the various considerations for developing a more diversified online distribution channel and widening their knowledge of marketing.
2. *Conversation* – In order to get into deeper details, staff members form small conversation groups to express their viewpoints about the inquiry that had been raised in the large group discussion.
3. *Training Seminar* – A workshop was organized for the entrepreneurs and staff members to develop the skills required to handle an online distribution channel, social media, website, and database for public relations and to promote merchandise. Participants were guided by experts in their own field to demonstrate the hands on practice of marketing via social media. A questionnaire was distributed to get the feedback of how well the workshop met their level of satisfaction.

- **SWOT Analysis**

A SWOT analysis was conducted as a useful tool for assessing the group's self-potential in carrying out an operation and identifying the critical threats and opportunities in a competitive environment. It is also useful to examine how the competition is likely to evolve and what implications this may have in terms threats and opportunities that the group will have to deal with. The internal analysis helps members understand which of the resources and capabilities are likely to be sources of competitive advantage and which are less likely to be sources of such advantages (Gürel and Tat, 2017).

- **TOWS Matrix**

A TOWS analysis was also conducted. As a tool used to generate, compare and select strategies for the best decision in moving forward, the TOWS concept is a trade-off between internal and external factors (strengths and weaknesses are internal factors and opportunities and threats external ones). The strength/opportunity (SO) strategy is a proactive strategy, which uses internal strengths to exploit external opportunities. The weakness/opportunity (WO) strategy eliminates weaknesses from within and exploits opportunities from outside.

The idea is to mitigate weaknesses in order to exploit opportunities. The strength/threat (ST) strategy uses inner strengths to avoid external obstacles and overcome any potential threats. The weakness/threat (WT) strategy reduces internal weaknesses and avoids external obstacles in order to avoid any possible threat.

4. Results and Discussion

The results of the SWOT analysis are shown in Figure 1.

Strengths	Weaknesses
<ol style="list-style-type: none"> 1. The silk products from Lamphun and cotton products from Chiang Mai are well-known and accepted. 2. Entrepreneurs have the knowledge and know-how fabric which has been passed on from generation to generation. 3. No other local producer can produce and claim that the finished items are genuine silk flower cotton from the Lamphun and Chiang Mai areas. 4. Entrepreneurs are creative and have the ability to design new weaving patterns. 5. Entrepreneurs have a network of villagers to produce their items on a continuous basis. 6. Entrepreneurs are willing to do whatever is needed to meet the needs for market development, public relations, and online sales. 	<ol style="list-style-type: none"> 1. Most entrepreneurs still do not fully understand changing consumer behaviors in digital marketing. 2. Entrepreneurs do not have the expertise in online media technology. 3. Most entrepreneurs lack efficiency developing new products to meet new demand. 4. Similar production process so they compete with each other. 5. No mutual cooperation among the silk flower groups. 6. Handicrafts require a lot of time and skills so items are produced in small quantities. Large demand cannot be met quickly. 7. Inconsistencies in the quality and pricing. It all depends on the reputation of each entrepreneur. 8. Entrepreneurs are located in remote areas. 9. No online sales management system. 10. No customer database or accurate information to generate interest in buying silk products.
Opportunities	Threats
<ol style="list-style-type: none"> 1. Local handicraft market is likely to grow. 2. The government provides funding, training and sets up promotional events. 3. Foreign costume designers interested in the cotton fabrics. 4. Online marketing platforms that allow online trading such as Lazada, Alibaba, Etsy, and Pingkoi. 5. Most people now have access to social media on their own which makes it easy and comfortable for small businesses to reach customers. 	<ol style="list-style-type: none"> 1. Unstable economic conditions which may create uncertainties in the market and limit its expansion. 2. Constant changes in consumer behavior. 3. Other fashion trends that are more modern and are reasonably priced. 4. The requirements of some online distribution platforms need to be complied to, such as payment method for destination, thus creating entry barriers to online trading. 5. Other products and brand names from overseas that have a stronger appeal to interested buyers.

Figure 1: SWOT Analysis

Figure 2 shows the TOWS Matrix. A development approach, based the SWOT and TOWS analyses, has been elaborated. As stated above, the idea is to use internal strengths to exploit external opportunities by starting using online marketing and sales.

	<p style="text-align: center;"><u>Strengths</u></p> <ol style="list-style-type: none"> 1. The silk and cotton products are highly well-known and accepted. 2. Entrepreneurs have the technical knowledge which has been passed on from generation to another. 3. No other local producers can claim that the finished items are genuine silk flower cotton from the Lamphun and Chiang Mai Provinces. 4. Entrepreneurs are creative and have the ability to design new weaving patterns. 5. Entrepreneurs have a reliable network of villagers for their production. 6. Entrepreneurs are ready to meet the needs for market development, public relations, and online sales. 	<p style="text-align: center;"><u>Weaknesses</u></p> <ol style="list-style-type: none"> 1. Most entrepreneurs still don't understand the marketing process, public relations, and changing consumer behavior. 2. Entrepreneurs do not have the expertise to use online media technology and access internet. 3. Most entrepreneurs still lack efficiency developing new products that meet market demand. 4. Products are similar and compete with each other. 5. No mutual cooperation among producers of silk items. 6. Since making handicrafts requires a lot of time and skills and items are produced in small quantities, larger demand may not be easily met. 7. Uncertainties in the quality and pricing of products (depend on the reputation of each entrepreneur). 8. Entrepreneurs are located in remote areas. 9. No online sales management system. 10. No customer database showing interest in buying silk products.
<p style="text-align: center;"><u>Opportunities</u></p> <ol style="list-style-type: none"> 1. Local handicraft market likely to grow. 2. Government provides funding, training, and promotional events. 3. Costume designers from abroad interested in bringing fabrics for design in the cottoning collection. 4. There is an online marketing platform that allows online trading such as Lazada, Alibaba, Etsy, and Pingkoi. 5. Most people now have access to social media on their own, which makes it easy and comfortable for small businesses to reach customers. 	<p style="text-align: center;"><u>SO Strategies</u></p> <p>“Proactive Strategies” use internal strengths to exploit external opportunities.</p> <ol style="list-style-type: none"> 1. (S1, S6, O1, O2, O3, O4, O5) Improve marketing and online sales. Develop the public relations, online sales and social media knowledge of staff. 2. (S1, S4, O1, O2, O3) Introducing silk and cotton to costume designers, both at home and abroad, and make these fabrics to part of the product. 	<p style="text-align: center;"><u>WO Strategies</u></p> <p>“Strategic Solutions” eliminate weaknesses from within and exploit opportunities from the outside.</p> <ol style="list-style-type: none"> 5. (W1, W2, W9, W10, O2, O4, O5) Organize training and teach entrepreneurs and staff marketing skills for public relations and online sales, and utilize social media to generate interest. 6. (W2, W9, W10) Make a website and a database of entrepreneurs and customers. 7. (W4, W5, W7, O1, O2) Create an entrepreneurial network and encourage strong cooperation. - Provide a strong network for knowledge and understanding of the buyers and the products.

<u>Threats</u>	<u>ST Strategies</u>	<u>WT Strategies</u>
<ol style="list-style-type: none"> 1. Unstable economic conditions may create uncertainties in market expansion of products. 2. Constant changes in consumer behavior. 3. More modern fashion trends available at more reasonable prices. 4. Some of the requirements of online distribution platforms can be a barrier to taking part in online trading (failure to comply with the policy means refusal to distribute the goods). 5. Indirect competitors have overseas products and brands with stronger appeal to buyers. 	<p>“Strategic Defenses” use inner strengths to avoid external obstacles.</p> <ol style="list-style-type: none"> 1. (S1, S2, S3, S4, T2, T3, T5) Design or create new products made of Lamphun silk flowers and cottons for display at the markets. 2. (S3, S6, T4) Apply training to develop skills and educate entrepreneurs on providing a good point-of-sale analysis and an online sales platform to draw interest in the merchandise. 	<p>“Strategic Directions” reduce internal weaknesses and avoid external obstacles.</p> <ol style="list-style-type: none"> 1. (W1, W4, T1, T3, T5) Reduce the amount of resources on products that have no value to the customers’ preference and distribute the goods where they sell better and are more attractive in that market.

Figure 2: TOWS Matrix

This requires a proactive strategy of ensuring that the staff is knowledgeable in marketing, public relations and online sales, and can utilize social media to introduce and promote the Lamphun silk and Mae Chaem cotton to designers residing locally and abroad. As one local staff members stated: " Lamphun Thai silk is very unique, no one in this world could copy the pattern and its quality [...] Mae Chaem’s cotton fabric is also the GI product, which could be found as the original product here in our area."

As to the strategic solution, the approach is on eliminating weaknesses from within and exploiting opportunities from the outside. This is done by organizing, training and educating the operators or personnel of the operators to have the marketing knowledge and skills of public relations, online sales, and social media. . One entrepreneur, however, feels that online financial transactions are dangerous for his business. A website should be set up along with a database of entrepreneurs and customers. Moreover, an entrepreneurial network should be created and strong cooperation among members encouraged. Lastly, incentives for strong networking should be provided.

With regard to the strategic defense, the method mentions using inner strengths to avoid external obstacles. The plan calls for designing or creating new products made out of silk. There also should be a workshop to train and educate entrepreneurs in providing a good point-of-sales analysis and an online sales platform.

Finally, the concept of a strategic direction is about reducing internal weaknesses and avoiding external obstacles. The focus is thus on having a significant trimming of the product line. Products that are not so popular should be discarded and the distribution of products that are best sellers further developed. As one entrepreneur mentioned, one way to do that is to “buy more online equipment and learn how to use them as our products should be sold worldwide through the internet.”

- Need for a Diversified Online Distribution Channel

The development of online marketing and sales should revolve around a certain time frame, such as configuring out whether the times in the morning, afternoon, evening, or night time on a particular day in the week and of that month are generating enough commercial traffic that ultimately leads to individuals making an order. It is important to keep track of periods when more items are ordered and also of periods when sales are low if for nothing else for the purpose of allocating resources that will push the sales up in slow periods and test new promotional ideas during peak periods. When local hand-made items are not selling at the expected level, information needs to be treated as value learning points for being more knowledgeable in terms of marketing, public relations, and for utilizing online sites and social media for promoting goods. Developing an understanding of why some products are not being ordered enough can also be part of an experimental design for an online system that makes customers wanting to buy those products (Lacka and Chong, 2016).

Whether customers are tourists, local buyers, or leisurely shoppers a diversified online distribution channel will need to be in a content that grabs all of their senses so that it helps fashion designers focus on developing products that meet their needs. Thus developing a diversified online distribution channel will require an array of individuals to communicate their ideas and other areas of interests that sustain the momentum of an order towards customer satisfaction and setting up conditions for repeat buyers (Keinänen and Kvivalainen, 2015). The technical terms used in the exchanges between key agents, staff and entrepreneurs would have to be communicated in a way that helps each other understand the complexity of the market and a take proactive stance. Building good reputation in the business stems from a strong discipline on knowing what one is competent and capable of producing as well as not exaggerating and puffing up competencies, which could ruin the credibility of the entire group (Guesalaga, 2016).

Although working facilities may not be adjacent to each other, the individuals who are part of the system will need to keep abreast and stay in close contact with others to make sure that the flow of information reaches everyone (Marcos-Cuevas et al., 2016). It is also critical to keep things simplified for customers so they do not become mentally exhausted in trying to make an order or browsing through the items. Most importantly though keeping things simplified is a must for workers so they do not become overburden with information or feel anxious due to a lack of clarity. Seminars for acquiring training would need to be arranged for groups to impart facts within the online system that may hinder its performance or to adjust concepts that enable customers to have a pleasant shopping experience (Li and Chen, 2016). The vast array of knowledge, skills, and abilities applied from each individual will determine the longevity of a diversified online distribution channel system. Getting the information to circulate and build a rapport of trust with customers should be a daily concern.

- Factors for Public Relations and for Promoting the Merchandise

If members are to make the most of the new marketing opportunities through social media and web sites they will need to keep on exploring on the trends and values that influence people to buy or not buy particular merchandise. In Thailand, the government has always been keen on preserving the cultural identity and heritage of the nation (Constantinides, 2014). One way to do that would be for the government to request local citizens, especially at educational institutions nationwide, to wear the local attires that have been part of the local folklore for centuries. Texts and photos can be used as part of a cultural campaign for public relations in reaching out to non-Thais that want to learn more about the local traditional style

of clothing. Another occasion for goods to be worn and displayed lavishly is during the holiday festivities, weddings, graduation ceremonies, and important banquets. Not only are these events important for feeding information into the web sites and social media but they can also serve as a database for entrepreneurs to learn more about their targeted customers and construct a psychographic profile of them. Getting a better understanding of who their customers are and why they bought their products should provide a strong purpose for coming up with more innovative ideas for redesigning merchandise that enhances the value to the buyer (Papazolomou, et al., 2014). Once the comprehension of customers becomes robust, the idea of sharing knowledge and learning about best practices in marketing should be encouraged as a form of entrepreneurial networking and fostering cooperation among peers.

However, networking can only be done if each member can see how advices and recommendations can help their business operations be more efficient in maintaining costs and expenses in marketing while also gaining some effective results with regards to sales (Perju-Mitran and Budacia, 2015). Cooperation can only be achieved if members believe they have the capacity to work within the process, which should not become a burden on one's schedule, should allow assistance to be easily provided and should not make people feel guilty if they're not able to fully accomplish the task (Papadas, Avlonitis and Carrigan, 2017). Naturally, not all the merchandise promoted will strike a big demand from buyers no matter how good the information may be about the products. It simply cannot be a magic wand that automatically generates sales. When times of setbacks and staggering sales occur, it is best for the network to offer insights on how to rise to the marketing challenges.

Strategies that incorporate digital media technology will require the knowledge, skills, abilities and talents of fellow colleagues to come up with something more creative to generate interest and attention towards making purchases. A research staff can be sent out to spot areas that feature people using the items as part of their daily lives and interview them to see what benefits they are actually receiving and make some possible recommendations for other things that could be produced. This is also a good opportunity to see where the level of quality stands and for learning more on where the values lie in the product. Finding out about why other people choose other items to buy instead through a person keen on the cotton and silk products can also serve as a valuable learning point for redesigning the goods or experimenting with a new market (Dua, Cui and Su, 2018). Such information can be brought back to the network for meaningful discussions on (re-)designing and market planning to reach those targeted customers. Even products that are designed by big brand names in the business of sports apparels and households can become vulnerable to sales slump but still keep on finding ways to get their products sold.

Social media has been effective in announcing sales promotion events for sportswear, fashion dress, and casual clothes but are still in the works of finding the best way to sort out an accurate information of the buying customers due to some individuals not being fully cooperative in giving out details due to language barrier, especially while they're in a middle of shopping (Yousaf and Xiucheng, 2018). Designing and creating a new product will have to come from facts gathered from key individuals who have intelligence that is derived from close contacts with their customers, co-workers, social influences, and with other important players that shape the industry. The sources provided help allocate the time and energy that goes into making products designed to attract the right customers through social media.

Most importantly workshops should be arranged for network members to acquire the basic know-how of building a strong rapport with people who have a strong acumen about the market for the purpose of learning how to ask the right questions and implement the appropriate methods for collecting important background details of the desired customers (Todeschini, 2017). Once there is a good pulse on the targeted customers the mechanism for laying out a friendly platform that guides the customer journey to sales and other promoted items becomes imminent for ensuring a smooth service operation. Products that are not so popular on the buyers' list would also need to be analyzed and reported for others in the network to be aware of. The main issue here is to avoid being redundant in a market where customers already know what items they deem enviable to pay money for. For products that are seen as having no value perhaps it is good to get the public involved (both local and international) to come up with an idea on how an unpopular product can be reconceived to offer value to customers. A popular product should be given away for free to those individuals partaking in the research study as a token of appreciation.

The most important thing is that members that are part of the network be supportive of the cause and keep looking for better opportunities to increase sales. There should be no shame or guilt if a new product idea does not sale as much as it had been expected to. The practice of promoting silk and cotton merchandise through an online web site and social media is an ongoing process that requires individuals to remain humble and patient. The results gained from the system can be a good testing indicator that proves whether the belief was the right decision made or to be reconsidered (Pappas, 2016). In addition, the results gained can also verify whether the experiment was successful or not successful due to other factors that may have been overlooked and not integrated into the process (Schmidt and Iyer, 2015).

- Factors for Acquiring Marketing Knowledge

Comments, interaction with photos and chats, recommendations, review of products and services available in the social media contain valuable information for developing a strategic marketing database that involves entrepreneurs and customers. The thoughts and opinions that occur spontaneously and cannot be fully under managerial control provide an indication of the values to be emphasized. A well recorded and updated file of entrepreneurs and customers can serve as a pipeline for siphoning through facts to obtain details for laying out a marketing plan to promoting more merchandise (Diaz Ruiz and Kowalkowski, 2014).

The method of marketing and the end results from the activities of getting the products sold will not always be embraced by everyone (some may have their own opinion). Nevertheless, there has to be trust in the networking system that keeps the partners working together (Sanclemente-Tllez, 2017). The stronger the cooperation among people the higher the chance there is for individuals to learn together how to improve the ways of getting the social media to work in their favor and collaborate in resolving issues to keep the business moving forward (Verhoef, Kannan and Inman, 2015). Although network members may be located away from each other they will need to develop a positive attitude that welcomes the idea of teaming for a social media marketing project that aims to promote local silk and cotton products. Given the informal working structure, they will have to find the time and space for coordinating their skills and abilities to keep the project moving forward. They must be able to share crucial knowledge quickly, learn to ask questions clearly and frequently, and make minor adjustments (Edmondson, 2012).

Fruitful analyses come from solid networking among group members who are in control of their own diagnosed information about the products and know how to satisfy the needs of customers. The strength in networking would come from allowing group members to arrange informal meetings on their own and share information based on figures, psychographics, emerging cases, or proven practices for stimulating a better sense of comprehension on how things are taking shape in the marketing aspects and dealing with the reality of what is working and what is not. Greater insights for networking can be invigorated by permitting group members to make collective decisions, conduct testing and experimentation on the ideas, and allowing them to follow up on the results for outlining an action plan which makes other take accountability and responsibility for carrying out the tasks. This creates a mental infrastructure that allows individuals the freedom to seek out and provide accurate information without having the burden to produce information on a timely basis (Cross and Katzenbach, 2012).

Designing or creating a new product would be derived from learning how current end users are truly benefitting from the products that meet their lifestyle needs. The values met would need to be put into a simple caption that displays the aesthetic quality of acquiring the goods. Perhaps it would also benefit customers to allow potential buyers to request that the product be customized to his/her preferential style thus opening up more background information on who their customers are. Gaining the knowledge and know-how of social media marketing requires entrepreneurs and their staff members to take a course on to deal with the changing lifestyle of customers and on how to foresee what type of products would be needed to ensure customer satisfaction. A workshop arranged for networking members would also give them a chance to discuss certain products that have not been quite popular with buyers. Moreover, learning about the practical ways of social media marketing and their customers' lifestyle behavior would also give them better insights for making products that add value instead of being just short-lived fads (Sankrusme, 2015).

5. Conclusion and Recommendations

When developing an online network for marketing local silk and cotton products, there are some factors to be considered before the concept can be fully systemized to take its course of action. Technological tools are there to be utilized in the best possible way to support the marketing strategy, but they requires the full capacities of group members in making a strong contribution and ensuring that results occur. While the working structure may not be highly formalized, it is thus very important to enroll the cooperation and collaboration of all so that no time, resources, and energy become wasted. Supporting an online distribution channel, arranging the technological resources for public relations and merchandise promotion, and understanding marketing through social media would require fellow networking members to uphold a culture that represents the shared value for being customer orientated and offering high quality in services (Yan and Pei, 2015).

It is imperative for the business to succeed that there be a cooperative spirit that keeps the principles and ideas intact and fosters a sense of accountability and responsibility for learning and searching for better techniques to assist in reaching the aims and objectives of the marketing plans (Xie et al., 2016). Development starts with a commitment to make the idea work and to keep on working whenever challenges arise. In the end, it all comes down to the willingness and cooperation of each individual member to become a team player, be an agent of change, provide leadership in goal sharing, and adapt for ways in making improvements for the system to work for all.

Although this work is limited in scope it contributes in laying out the plans for developing an online and social media for an entrepreneurial network. But entrepreneurs have exhibited a number of limitations that will need to be addressed. These include:

1. The availability of equipment for online media training.
2. The inability to prepare online information for the majority of the entrepreneurs to access online media.
3. Entrepreneurs' lack of knowledge and skills for conducting online marketing.
4. Entrepreneurs did not want to perform financial transactions in online media as they thought that there was a high risk involved.
5. The participation of entrepreneurs in a collaborative network was still weak.

In spite of these limitations, entrepreneurs should therefore develop a strong collaboration network with other local entrepreneurs and should invest and take advantages of the financial transactions with the online tools.

Recommendations for Future Research

1. Extend the research content into the inner mental drives of entrepreneur and staff, e.g. needs of achievement, self-motivation.
2. Marketing factors might be applied as variables in future studies.

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Strategic Internal Audit Proficiency on Sustainable Audit Success: An Empirical Investigation of Listed Firms in Thailand

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Abstract

This study attempts to investigate the determinants on strategic internal audit proficiency and sustainable audit success through mediating effect of financial information value, audit survival commitment and effective audit judgment. Accounting system support is a moderating variable on the relationship among strategic internal audit proficiency and consequence variables. The key research question is how strategic internal audit proficiency has an influence on sustainable audit success. Questionnaire is used as an instrument for data collection. Here, 169 internal audit executive or internal audit director of each firm in Thailand were selected as key informant. The Ordinary Least Squares (OLS) regression analysis is employed to examine all hypotheses. The results indicate that some dimensions of strategic internal audit proficiency, namely internal audit innovation orientation, dynamic internal audit integration and proactive internal audit awareness almost have a significant positive effect on financial information value, audit survival commitment and effective audit judgment. Moreover, financial information value, audit survival commitment and effective audit judgment has a significant positive effect on sustainable audit success. Likewise, financial information and effective audit judgment have a significant positive on audit survival commitment. Finally, the moderating shows some partial support for hypotheses derived from the conceptual model.

Keywords: strategic internal audit proficiency, sustainable audit success, internal audit innovation orientation, dynamic internal audit integration, proactive internal audit awareness.

1. Introduction

Nowadays trends of global marketplace have economic freedom and globalization. The business environment is fast changes; corporations face increasingly competitive either domestic or foreign all resulted in the expansion of the capitalism of global economy. Therefore, to maintain competitive advantage, many organizations are striving constantly to increase their effectiveness and efficiency (Hunt, 2004). In addition to these changes, the current corporate scandals, and the global financial crisis and lack of transparency in business operation, corporate governance has received significant attention from regulators and the public (Badara, 2015). Internal and external stakeholders force business to perform greater financial reporting in decision making. Consequently, stakeholders force has been increasing in significant motivation for accounting quality audit and control in organizations. Across the globe, internal audit leaders are making strides toward excellence in demonstrating business acumen, technical expertise, and relationship skill to be invaluable resources in furthering the organization's governance, risk management, and strategic objectives (Jameleddine, 2001). Therefore, internal auditing has gained increasing importance as an important monitoring in corporate governance.

The internal auditors play a unique and critical role in corporate governance by monitoring organizational risks and helping insure financial reporting reliability (Institute of Internal Auditors, 2016). Internal audit proficiency is an important system of organization to operate effectively. It comprises the assurance on the reliability of business information. Moreover, it can help enhance firm performance and ongoing sustainability. The proficiency concept is applied to the assessment of individual performance that identifies behavior factors related to job performance. Previous studies have suggested that proficiency as the ability to apply or use knowledge, skills attitudes, qualification, and experiences to successfully perform critical audit tasks and operate in a given role (Furiady and Kurnia, 2015). In addition, audit is a process of collection and evaluating evidence of the financial statement to verify and report the degree of information in accordance with criteria of related standards.

Moreover, internal audit proficiency has an effect on the quality of audit outputs and audit effectiveness; and ensure that financial information is reliable and useful (Alrshah, 2015). In other words, internal audit is one of the most powerful means of monitoring and promoting good governance system by addressing in a systematic way and methodical proves of evaluating and improving the quality of economic activities and process with organization (Ghilic-Micu Mircea, & Stoica, 2010). A high level of internal audit proficiency allows auditors to perform task that will provide better services, respond to expectations of users, and live up to the expectations of audit targets, to perform and audit in accordance with auditing standards, interpret the audit standards, give better judgments, and act fairly. Consequently, internal audit proficiency raises the effectiveness of the audit, conveying the audited financial information with reduced ungainly and risk for the decision-making of stakeholders, reducing audit failures, and enhancing the stakeholders' confidence. Therefore, internal audit proficiency refers to the ability of auditors to completely perform audit functions through application or use of knowledge, skills, and attitudes associated with a profession, with leads to the raising of the quality of audit services, responding to stakeholders needs, and achieving the goals of audit (Furiady & Kurnia, 2015).

Previous studies found that an Indonesian auditors' proficiency has influenced the quality of audit results (Samuel and Afiah, 2013). Moreover, Thailand and Indonesia are in the Association of South East Asian Nations community but have different social, cultural, and political environments (Business Information Center, 2016). Also, the difference of the sample of the country that has different environment factors may interesting to study how internal audit proficiency affects audit results, especially in Thailand. In this study, population and sample are all Thai listed firms in The Stock Exchange of Thailand (SET), which has internal audit department within firm followed to the requirements of The Securities and Exchange Commission (SEC). Thai listed firms tend to implement internal audit control for risk management purposes. The internal audit function is necessary as an assistant of the audit committee in performing its responsibilities effectively. Moreover, Thailand has mandate from its respective stock exchange /government that requires listed companies to have an internal audit function, whether in-house or outsourced (Asmara, 2016).

Specifically, this study proposed that strategic internal audit proficiency, it can help auditors understand the accounting system and internal controls that are applied differently in each firm and understand the overall picture of situations. Therefore, proficiency as the ability to apply or use knowledge, skills, attitudes, qualifications, and experiences to successfully perform critical audit tasks and operate in a give role (Furiady & Kurnia, 2015). In addition, the knowledge-based theory is an important resource that helps the internal auditor to maximize and add value for the firm. The social cognitive theory is applied to explain the phenomena of internal audit proficiency.

Research Objectives

The main purpose of this study is to examine the effects of strategic internal audit proficiency on sustainable audit success via financial information value, audit survival commitment and effective audit judgment. Also, this study examines the moderating effects of accounting system support. In addition, the specific research purposes are as follows:

1. To investigate the effects of each dimension strategic internal audit proficiency on financial information value, audit survival commitment, effective audit judgment and sustainable audit success.
2. To examine the mediating effects of three consequences on sustainable audit success;
specially
3. To empirically examine the association between financial information value and effective audit judgment with audit survival commitment,
4. To scrutinize the moderating effects of accounting system support on strategic internal audit proficiency and consequences.

Theoretical Foundation

The knowledge-based theory of the firm considers knowledge as the most important asset to the company's strategy and is often difficult to imitate in a complex knowledge-based society. A firm's knowledge can be advanced by either absorbing existing knowledge external to the firm or by developing new knowledge in order to increase maximization of the firm's value (Nickerson and Zenger, 2004). Social cognitive theory has emerged an important theoretical perspective for understanding and explaining human behavior and action (Keen and Mahanty, 2006). Summarily, both theories explain the internal auditor behavior in a different aspect, but they can be applied together to explain the relationship of variables in the conceptual model. The knowledge-based theory explains the necessity of auditors to perform their duties with professional audit proficiency. The social cognitive theory explains auditors' behaviors are affected by personal and environmental factors; and then auditors' behaviors have an effect on audit success. According to the theoretical foundations, internal audit need to have adequate proficiency in performing a performance audit; and since audit performance is determined by an auditor's knowledge, skills. And attitudes; thus, there is an expectation that increased knowledge, skills and attitudes will lead to a superior result in efficient and effective audits.

2. Literature Review, Conceptual Framework, and Research Hypotheses Development

A proficient auditor would be able to apply their knowledge, skills, and attitudes associated with a profession, which leads to the raising of the quality of audit services, responding to stakeholder needs, and achieving the goals of the audit (Furiady & Kurnia, 2015). Clearly, strategic internal audit proficiency is important for auditors to successfully carry out their duties. This construct consists of three dimensions: internal audit innovation orientation, dynamic internal audit integration and proactive internal audit awareness. Then, a conceptual model of this study is presented as shown in Figure 1 below:

Strategic Internal Audit Proficiency

It is the ability of auditors to completely perform audit functions through application or use of knowledge, skills, to perform audit tasks relies on accounting standards, auditing standards, related codes of conduct, and apply professional audit proficiency to achieve the expected outcomes.

- ***Internal Audit Innovation Orientation*** is defined as new or developed internal audit strategies and techniques that the internal auditor uses to conduct internal audit activities

about risk assessment, internal control, and consulting for management to increase the efficiency and focus on a participative internal audit (EL-Annan, 2013). In addition, the operation of innovation challenge for business competitiveness must be focused on the relationships with organizational performance. Hence, this study proposed the following hypotheses below:

Hypothesis 1a-1c: The greater internal audit innovation orientation is, the more likely that firm will achieve higher (a) financial information value; (b) audit survival commitment; and (c) effective audit judgment.

- **Dynamic Internal Audit Integration** is defined as the competency of firms to combine the ability of the chief audit executive, audit method, audit risk procedure and cooperation of all units to identify and manage potential uncertainty in each activity of the firms. Furthermore, dynamic internal audit integration has the potential possibility to affect operation risk protection, financial information reliability, organization expenditure reduction and firm value (Maria, 2012). Hence, this study proposed the following hypotheses below:

Hypothesis 2a-2c: The greater dynamic internal audit integration is, the more likely that firm will achieve higher (a) financial information value; (b) audit survival commitment; and (c) effective audit judgment.

- **Proactive Internal Audit Awareness** is defined to auditors who are planning their task that focused on the good performance in the future, having regard to the prudent and appropriate control of the situations. Roth (2013) has suggested in the firm level view that proactiveness is to change things, in an intended direction, for the better, or creating new things. Hence, this study proposed the following hypotheses below:

Hypothesis 3a-3c: The greater proactive internal audit awareness is, the more likely that firm will achieve higher (a) financial information value; (b) audit survival commitment; and (c) effective audit judgment.

Mediating Effects of Consequences

Financial Information Value is defined as the information that is effective and responsive for informational users and accepted from stakeholders for economic decision making, including the adoption in accounting policies of administration, which is use for decision making efficiency (Anis, 2014). Besides, it also provides information on both actual and truth data of the firms that helps organization manage to plan and control business operation. Internal auditors improve the quality, reliability and transparency of financial statements by lending credibility to the financial information value by reducing the risk that the information is materially misstated. Lee and Ali (2008) claim that internal audit system with the development of use of information technology is to provide adequate and appropriate evidence to achieve the audit success. Hence, this study proposed the following hypotheses below:

Hypothesis 4: The higher financial information value is, the more likely that the firm will gain greater sustainable audit success.

Hypothesis 7: The financial information value has a positive influence on audit survival commitment.

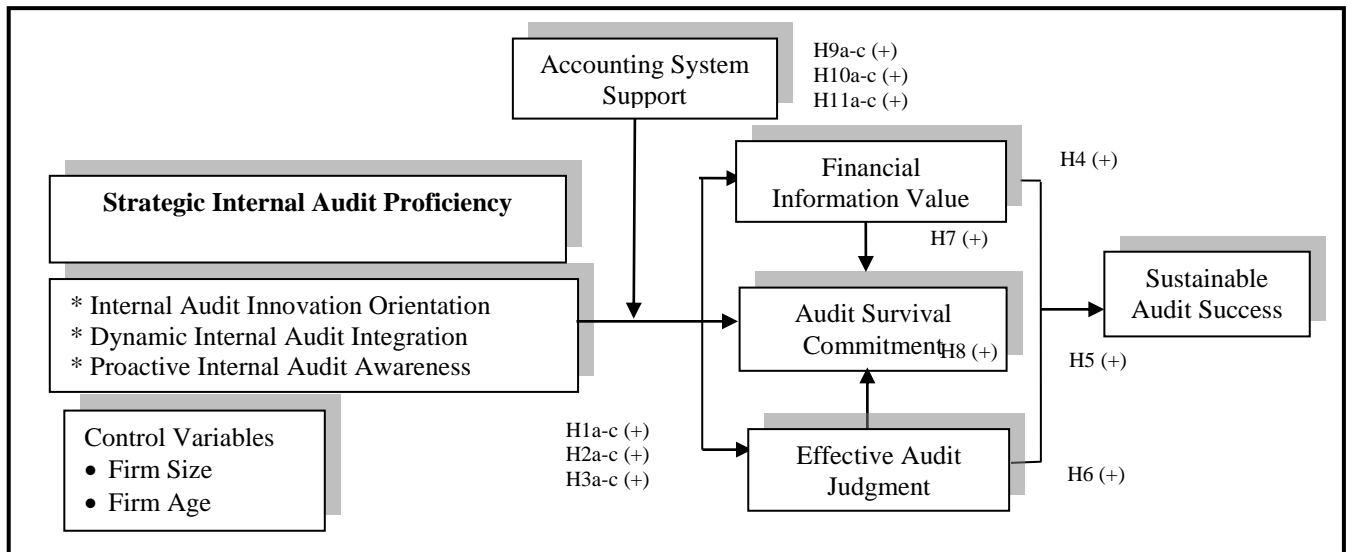


Figure 1: Conceptual Model Strategic Internal Audit Proficiency and Sustainable Audit Success: An Empirical Investigation of Listed firms in Thailand

Audit Survival Commitment refers to the auditor's intention to continually remain in the audit profession with a focus on spending more effort to build value for stakeholders, a willingness to work hard to achieve their objective, spending more time on developing knowledge and skills, and avoiding the use of dysfunctional audit behaviors (Octavia, 2015). Prior research indicated that auditors should adhere to a code of conduct, emphasize following audit procedures, exercise professional skepticism, and should do everything necessary to satisfy their client, as well as having an intention to remain in the occupation. Thus, the internal auditors with audit survival commitment reflects the willingness to spend effort to achieve their goal. Hence, this study proposed the following hypothesis below: Hypothesis 5: The higher audit survival commitment is, the more likely that the firm will gain greater sustainable audit success.

Hypothesis 5: The higher audit survival commitment is, the more likely that the firm will gain greater sustainable audit success.

Effective Audit Judgment is defined as the discretion of auditors that enables auditor's understanding of a business context to address the question of how well a given auditing task is performed. Auditing is expected to play a value-adding role by providing financial information which reduces uncertainty and risk for the decision-making of stakeholders. Thus, internal auditors need to serve the interests of stakeholders which leads to the effectiveness of the audit work (Maria, 2012). Therefore, effective audit judgment can improve audit effectiveness for audit report quality, and attempt to enhance audit performance so as to influence audit survival (Idawati, 2015). Hence, this study proposed the following hypotheses below:

Hypothesis 6: The higher effective audit judgment is, the more likely that the firm will gain greater sustainable audit success.

Hypothesis 8: The effective audit judgment has a positive influence on audit survival commitment.

Moderating Effects of Accounting System Support

Accounting system support refers to ability of accounting system to be used for supporting operational transaction processing of firm with precision and speed. A good accounting system can help organizations get gain more quality and useful information (Calota &

Vinatoru, 2015). Moreover, it can add competitive opportunity and gain more organization value. Hence, this study proposed the following hypotheses below:

Hypotheses 9-11: The higher the accounting system support is, the more likely that firm will moderate the relationship among strategic internal audit proficiency and (a) financial information value, (b) audit survival commitment, and (c) effective audit judgment.

3. Research Methodology

- *Sample Selection and Data Collection Procedure*

Thai-listed firms in this study are 628 samples drawn from the database of The Stock Exchange of Thailand, at <http://www.set.or.th>, accessed on July 18, 2018. Steps to mail survey questionnaires used to collect data, key participants are internal audit executive, internal audit director or internal audit manager of each firm. The valid mailing was 628 surveys, from which 169 responses were received of the questionnaires completed and usable. The effective response rate was approximately 26.91%.

- *Questionnaire Development*

In this study, most of the constructs in the conceptual model are newly developed. Consequently, a pre-test method is appropriately conducted to assert the validity and reliability of the questionnaire. Firstly, the questionnaire will be double-checked by a specialist and experienced scholars. Later, the rational of the pre-test will be conducted to check for a clear and accurate understanding of the questionnaire before using real data collection. A questionnaire consists of six parts. Part one asks for personal information. Part two is about general background information of an organization. Part three was related evaluating each of constructs in the conceptual model. The questions in the fourth part measure consequence of strategic internal audit proficiency and sustainable audit success. In the fifth part, the moderator variable was detailed. Finally, an open-ended question is included in part sixth. In this conceptual model, all variables measured on the five point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) excluding control variables. Additionally, all of constructs are developed as a new four-item scale for measuring from the definition of each construct and relevant literature review.

- *Validity and Reliability*

Validity reflects the accuracy of the measurement that evinces the concept of consideration. In order to verify the research instrument accuracy and validity, two types of validity, comprising content validity and construct validity, are tested. Firstly, content validity is a measure of the degree to which data was collected using a particular instrument representing a specific domain or content of particular concept. Two academic experts in the field of study to ensure that the questionnaires used contained appropriate wording, and all constructs were sufficient to cover the contents of the variables. Secondly, factor analysis is used to examine the construct validity of the data in the questionnaire, the size of the factor loading must be greater than the 0.40 cut-off, and they are statistically significant (Nunnally and Bernstein, 1994). All factors loading is greater than the 0.40 cut-off and are statistically significant.

According to Susanty et al. (2015), the reliability is a measurement of the stability and consistency of the respondent in answering items concerning constructs that are a dimension of a variable and formed in a questionnaire. The reliability testing in this research was used the item-total correlation and Cronbach's alpha to test the reliability of the data.

Firstly, the item-total correlation, each item score should exceed 0.3 because it means each item does correlate very well with the scale overall. (Hair, Black, Babin & Anderson, 2010). The reliability of the measurements was secondly evaluated by Cronbach alpha coefficients. In the scale reliability, Cronbach alpha coefficients are greater than 0.70. This

scale of all measures appears to produce internally consistent results. Thus, these measures are deemed appropriate for further analysis because they express an accepted validity and reliability in this study.

Table 1: The Results of Measure Validation

Variables	Factor Loadings	Item-total correlation	Cronbach's Alpha
Internal Audit Innovation Orientation (IAIO)	.725 - .825	0.720-0.815	.820
Dynamic Internal Audit Integration (DIAI)	.816 - .851	0.682-0.809	.817
Proactive Internal Audit Awareness (PIAA)	.742 - .771	0.702-0.748	.765
Financial Information Value (FIV)	.768 - .802	0.807-0.821	.834
Audit Survival Commitment (ASC)	.827 - .854	0.675-0.835	.853
Effective Audit Judgment (EAJ)	.762 - .777	0.673-0.726	.754
Sustainable Audit Success (SAS)	.733 - .763	0.657-0.687	.692
Accounting System Support (ASS)	.742 - .789	0.658-0.671	.675

Statistical Techniques

The Ordinary Least Squares (OLS) regression analysis is used to test and examine the hypotheses following the conceptual model. All variables were neither nominal data nor categorical data; OLS is an appropriate method for examining the hypotheses relationships. The equation models of the aforementioned relationships are shown as follows:

$$\text{Equation 1: } FIV = \alpha_1 + \beta_1 IAIO + \beta_2 DIAI + \beta_3 PIAA + \beta_4 ASS + \beta_5 (IAIO * ASS) + \beta_6 (DIAI * ASS) + \beta_7 (PIAA * ASS) + \beta_8 FS + \beta_9 FA + \varepsilon$$

$$\text{Equation 2: } ASC = \alpha_2 + \beta_{10} IAIO + \beta_{11} DIAI + \beta_{12} PIAA + \beta_{13} ASS + \beta_{14} (IAIO * ASS) + \beta_{15} (DIAI * ASS) + \beta_{16} (PIAA * ASS) + \beta_{17} FS + \beta_{18} FA + \varepsilon$$

$$\text{Equation 3: } EAJ = \alpha_3 + \beta_{19} IAIO + \beta_{20} DIAI + \beta_{21} PIAA + \beta_{22} ASS + \beta_{23} (IAIO * ASS) + \beta_{24} (DIAI * ASS) + \beta_{25} (PIAA * ASS) + \beta_{26} FS + \beta_{27} FA + \varepsilon$$

$$\text{Equation 4: } SAS = \alpha_4 + \beta_{28} FIV + \beta_{29} ASC + \beta_{30} EAJ + \beta_{31} FS + \beta_{32} FA + \varepsilon$$

$$\text{Equation 5: } ASS = \alpha_5 + \beta_{33} FIV + \beta_{34} EAJ + \beta_{35} FS + \beta_{36} FA + \varepsilon$$

4. Results

A bivariate correlation analysis of Pearson's correlation is employed to explore the relationships among variables and detect multicollinearity in multiple regression assumption. Multicollinearity might occur when inter-correlation in each predict variable is more than 0.80, which is a high relationship (Hair, Black, Babin & Anderson, 2010) In this study, the bivariate correlation procedure is scaled to a two-tailed test of statistical significance at $p < 0.01$ and $p < 0.05$, of which the result is shown in table 2.

Interestingly, as shown in table 3, variance inflation factors (VIF) were used to provide information on the extent to which non-orthogonality among independent variables inflates standards errors. The VIFs range from 2.479 – 3.384 are well below the cut-off value of 10 meaning the independent variables are not correlated with each other. Therefore, there are no substantial multicollinearity problems encountered in this study.

Table 2: Descriptive Statistics and Correlation Matrix

Variables	IAIO	DIAI	PIAA	FIV	ASC	EAJ	ASS
Mean	4.036	4.112	4.082	4.138	4.204	4.059	4.016
SD	.407	.414	.452	.413	.438	.416	.421
IAIO	1						
DIAI	.521**	1					
PIAA	.466**	.663**	1				
FIV	.568**	.511** *	.638**	1			
ASC	.634**	.524**	.531**	.616** *	1		
EAJ	.490**	.581**	.545**	.518**	.533**	1	
ASS	.554**	.583**	.565**	.528**	.542**	.643**	1

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

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

5. Discussion

- *Influences of Strategic Internal Audit Proficiency and Consequences*

Table 3 presents the results of OLS regression analysis that affects three dimensions of strategic internal audit proficiency on financial information value, audit survival commitment and effective audit judgment. The hypotheses predicted positive relationships. The results show that internal audit innovation orientation has positive significant impact on financial information value ($\beta_1 = 0.272$, $p < 0.05$), audit survival commitment ($\beta_{10} = 0.225$, $p < 0.05$), and effective audit judgment ($\beta_{19} = 0.192$, $p < 0.05$). Prior research found that when organizations adjust their new or developed techniques of internal audit mechanism according to internal audit systems, they will be able to ensure the reliability of financial information value (Maria, 2012). Importantly, a strong innovation system of internal audit is the techniques for risk management through early detection and prevention of error and fraud which help to audit success (Vijayakumar and Nagaraja, 2012).

Moreover, innovation can make the concept of an operation successful, when the organization takes risks in the process that lead to business success in the future. Hence, hypotheses 1a-1c was supported. In addition, dynamic internal audit integration has positive significant impact on financial information value ($\beta_2 = 0.186$, $p < 0.05$), audit survival commitment ($\beta_{11} = 0.281$, $p < 0.05$), and effective audit judgment ($\beta_{20} = 0.164$, $p < 0.05$). These empirical results are consisting with Badara (2015) who suggested that risk assessment process and audit risk methodology are the key factors that influence audit success and audit judgments as well. Moreover, the effectiveness of internal audit is due to internal audit method integration, which the tool creates financial information reliability. Thus, hypotheses 2a-2c were supported.

Consequently, proactive internal audit awareness has positive significant impact on financial information value ($\beta_3 = 0.182$, $p < 0.05$), and audit survival commitment ($\beta_{12} = 0.193$, $p < 0.05$). Firm's proactive internal audit awareness is characterized as the changing procedure

or things about the firm's operation in order to improve existing circumstances, and potential ongoing. (Silvija, 2014). Surprising, proactive internal audit awareness has no significant positive impact on effective audit judgment ($\beta_{21} = 0.074$, $p > 0.05$). Thus, hypotheses 3a-3b were supported. Table 3, also tested the moderating effect of accounting system support on the relationships between strategic internal audit proficiency on its consequences. The findings indicated that the interaction between accounting system support and internal audit innovation orientation has a positive significant effect on effective audit judgment ($\beta_{23} = 0.175$, $p < 0.05$).

Asmara (2016) found that a good accounting system can help organizations get gain more quality and useful information. Therefore, hypotheses 9c was supported. The interaction between accounting system support and dynamic internal audit integration has positive significant effect on financial information value ($\beta_6 = 0.184$, $p < 0.05$), audit survival commitment ($\beta_{15} = 0.148$, $p < 0.05$), and effective audit judgment ($\beta_{24} = 0.152$, $p < 0.05$). Hence, hypotheses 10a-10c was supported. Accounting system support has become the core operation system used to process transactions data from several functions to provide the reliable for managements and stakeholders to decision making in order to increase business value (Jameleddine, 2001).

- *Influences of Consequences and Sustainable Audit Success*

Table 3 presents of OLS regression analysis, that financial information value, audit survival commitment and effective audit judgment have an effect on sustainable audit success. The results show that financial information value has a significant positive influence on sustainable audit success ($\beta_{28} = 0.254$, $p < 0.05$), and audit survival commitment ($\beta_{33} = 0.217$, $p < 0.05$). Therefore, hypotheses H4 and H7 were supported. Prior research demonstrated that the financial information value is a key to a success of organization which reflects a substance of information and can be implemented for decision making efficiency (EL-Annan, 2013). Besides, audit survival commitment has a significant positive effect on sustainable audit success ($\beta_{29} = 0.165$, $p < 0.05$). Thus, hypotheses H5 was supported. Badara (2015) stated that audit survival commitment is a key factor stimulating auditors' professional proficiency that uses knowledge, skills, and attitude to provide a high quality of audit outcomes.

Additionally, effective audit judgment has a significant positive influence on sustainable audit success ($\beta_{30} = 0.204$, $p < 0.05$), and audit survival commitment ($\beta_{34} = 0.181$, $p < 0.05$). Thus, hypotheses H6 and H8 were supported. Previous studies suggest that effective audit judgment can improve audit effectiveness for audit report quality, and attempt to enhance audit performance so as to influence audit success (Calota & Vinatoru, 2015). This study also provides more contribution to executives and internal audit managers regarding available internal audit proficiency in organizations. The knowledge and literature can help internal auditors put more emphasis on the internal audit proficiency that can change, develop and transform the current internal audit process to include new ideas.

Table 3 : Results of OLS Regression analysis^a

Independent Variables	Dependent Variables			
	Equation 4: Sustainable Audit Success	Equation 1: Financial Information Value	Equation 2: Audit Survival Commitment	Equation 3: Efficient Audit Judgment
Internal Audit Innovation Orientation (IAIO)		.272** (.079)	.225** (.083)	.192** (.085)
Dynamic Internal Audit Integration (DIAI)		.186** (.089)	.281** (.089)	.164** (.093)
Proactive Internal Audit Awareness (PIAA)		.182** (.085)	.193** (.088)	.074 (.091)
Accounting System Support (ASS)		.132 (.080)	.167** (.090)	.193** (.093)
IAIO x ASS		.034 (.071)	.027 (.060)	.175** (.077)
DIAI x ASS		.184** (.083)	.148** (.093)	.152** (.077)
PIAA x ASS		.024 (.067)	.046 (.033)	.051 (.081)
Financial Information Value (FIV)	.254** (.092)		.217** (.078)	
Audit Survival Commitment (ASC)	.165** (.090)			
Efficient Audit Judgment (EAJ)	.204** (.087)		.181** (.070)	
Firm Size (FS)	.005 (.093)	0.204** (.106)	0.137* (.123)	.190* (.106)
Firm Age (FA)	.100 (.094)	-0.11 (.016)	-0.172 (.012)	-0.151 (.106)
Adjusted R square	.301	.369	.384	.432
Maximum VIF	2.479	3.384	3.384	3.384

Note: The value of the beta coefficients is in the first row.

Below are the values of standard error in the parenthesis. ***p < 0.01

**p < 0.05

6. Conclusion

Nowadays, the rapid change and volatility economic environment has influenced the predictability of firms in survived and maintain of sustainable growth in the high competition situation. Many firms try to meet the appropriate management method to improve the operation practices to increase in long term. Then, strategic internal audit proficiency is a dynamic concept, improvement into organization's platform, which can be enhancing the

probability to successful transformation significantly and also added value of firm. This study examines the influences among three dimensions of strategic internal audit proficiency namely, internal audit innovation orientation, dynamic internal audit integration and proactive internal audit awareness on sustainable audit success. Mediator variable consisting of financial information value, audit survival commitment and effective audit judgment. This study also examines the effect of accounting system support as a moderator. The questionnaire is used as an instrument. The sample selection is the internal audit executive or internal audit director, which a total 169 were collected.

The results indicate that internal audit innovation orientation, dynamic internal audit integration and proactive internal audit awareness almost has a significant positive effect on financial information value, audit survival commitment and effective audit judgment. Moreover, all consequences have a significant positive effect on sustainable audit success. Likewise, financial information value has a significant positive effect on audit survival commitment and then effective audit judgment has a significant positive effect on audit survival commitment. The moderating effect of accounting system support is a partial moderator relationship between internal audit innovation orientation and dynamic internal audit integration on financial information value, audit survival commitment and effective audit judgment. The executive of the internal audit should be aware of strategic internal audit proficiency that is able to support the internal audit task. In addition, firms have corporate sustainability vision appended to corporate governance culture by helping firms to have more audit proficiency.

The limitations of this study were tested separately to find out the effect on sustainable audit success. However, future research may use other sampling populations are different in style and characteristics to compare the results. In order to gain credibility more research and confirmed the generalizability of research. Future research should employ strategic internal audit proficiency as a whole or research other consequences. Not only were there the limitations stated earlier, there is also other limitation. First, attempt to study on other potential moderating variables. Collection of the data was used by questionnaires and the self administration may lead to bias and halo effect, other methods may apply in the future such as in-depth interviews, case studies.

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The Relationship between Personal Characters and the Organizational Performance of a Learning Organization: A Case Study of the School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University, Thailand

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Abstract

The objectives of this research are to study the personal characters of human capital at the School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University, and examine the relationship between personal characters and the organizational performance of the learning organization. The population consists of 45 persons who work at the school of agriculture and cooperatives. The sample size consists of 37 persons who work for the School of Agriculture and Cooperatives, 29 of whom work as academic staff and 8 as support staff. The primary data were collected by questionnaire while the secondary data were collected from the official documents and website. Descriptive statistics was applied. The inferential statistics used multiple regressions. The estimated parameters were applied by Ordinary Least Square (OLS), t-test, F-test and the Coefficient of Determination (R^2). The results show that the majority of employees were females, 45 years old or older who hold a doctoral degree and have associate professor positions. Most of them are also government officers and have been involved with the school for over 20 years. Five personal traits of character have positive relationship with innovation; creating capacity, personal commitment to lead the organization toward becoming a learning organization, sharing opinions with co-workers, personal learning and studying for job success, and personal skills analyzing problems for job improvement in the future.

Keywords: Personal characters, organizational performance, learning organization.

1. Introduction

Sukhothai Thammathirat Open University (STOU) was officially established by Royal Charter on 5 September 1978 as Thailand's eleventh state university. His Majesty King Bhumibol Adulyadej (King Rama IX) graciously bestowed the university its name in honor of King Prajadhipok (King Rama VII), who once held the title "Prince Sukhothai Thammara" prior his accession to the throne (www.stou.ac.th). On 24 October 1978, His Majesty issued royal mandates appointing the first University Council and appointing Professor Dr. Wichit Srisa-an as the first president, effective from January 1978. After approximately two years of preparation, STOU received its first academic class on 1 December 1980. STOU began with three faculties: Educational Studies, Liberal Arts and Management Science. From 1979 to 1984, STOU had no home campus of its own, so it had to share space with such agencies as the National Education Commission, Thai Airways, the Faculty of Economics of Chulalongkorn University, and the Ministry of University Affairs.

In 1981, Mr. Monkol Kanjanapas donated to the university a 30-rai section of land located in the Pakkret district in Nonthaburi province. The university then bought more land, bringing the total area to approximately 135 rai. Construction at this site began in 1982, and the university began operating from the new location on 9 December 1984. At its founding, STOU was the first university in Southeast Asia to use distance learning. This new system of learning has expanded the role of higher education in Thailand by engaging learners who previously had no opportunity to further their education. It has enabled the development of individuals and communities throughout Thailand and beyond.

The School of Agriculture and Cooperatives is one of twelve schools that make up Sukhothai Thammathirat Open University. At that time it was established, the school of agriculture and cooperatives had only 2 academic majors – agricultural extension and cooperatives extension. The program was founded on the conviction that since agriculture has been the livelihood of Thai people for times immemorial, economic development in Thailand is tied to development of the country's agricultural potential. The school continues to rely on this philosophy in teaching students subjects such as agricultural production methods, agricultural technology, and the formation and management of agricultural cooperatives. In addition, the school aims to give students a solid understanding of Thailand's natural resources and resources for conservation through agricultural practices.

Today, Sukhothai Thammathirat Open University School of Agriculture and Cooperatives, has three main functions: (i) distant teaching, (ii) research, and (iii) social services. It has 45 employees divided into 2 categories; academic and service staff. The 37 academics staff comprises associate professors, assistant professors and lecturers. The 8 employees in the academic service staff consist of the chief of secretary and officers. Since its establishment in 1982, the school of agriculture and cooperatives has had to face major changes in global, societal and economic environment. Dynamic education requires the school to adjust to these changes. This is especially true of its human capital. They, themselves, have to adopt the concept of Learning Organization (LO), adjust to it and develop themselves toward it. This research focuses on the organizational performance of the School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University, Thailand, in relation to the traits of character of its human capital. More specifically, the objectives of this study are to:

1. study the personal character traits of the human capital at the School of Agriculture and Cooperatives; and
2. examine the relationship between personal character traits and the organizational performance of the School of Agriculture and Cooperatives as a learning organization.

2. Literature Review

- *Learning Organization Theory*

In his work, *The Fifth Discipline: The Art and Practice of Learning Organization*, Senge (1990), determined that a learning organization depends upon the mastery of five dimensions which are : (i) systems thinking, (ii) personal mastery, (iii) mental models, (iv) shared vision, and (v) team learning. This requires an understanding of the whole as well as the components, not unlike the way a doctor should understand the human body. Some of the key elements here are recognizing the complexity of the organization and having a long-term focus. Senge (1990) advocates the use of system maps that show how the systems connect. System thinking is a conceptual framework, a body of knowledge and tools that has been developed over the past fifty years, to make the full patterns clearer, and to help us see how to change them effectively. Senge (1990) describes personal mastery as a process where an individual strives to enhance his vision and focus his energy and be in a constant state of

learning. Human capital in an organization should be able to consistently realize the results that matter most deeply to it. It should be done that by becoming committed to their own lifelong learning. Mental models refer to "deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action" (p. 95). These must be recognized and challenged so as to allow for new ideas and changes. Shared vision can be a powerful motivator. A leader's vision does not necessarily become shared by those below him. The key here is to pass on a picture of the future. To influence using dialogue, commitment, and enthusiasm, is preferable to trying to dictate everything. Storytelling is one possible tool that can be used here. According to Senge (1990), building a shared vision is what leaders in an organization should rely upon to inspire the organization. Team learning, the stage at which team members think together in order to achieve common goals, builds on a shared vision and adds the element of collaboration. Effective dialogue is the beginning state of team learning to enter into a genuine "thinking together".

Senge (1990), also describes the learning organization as a place where people continually expand their capacity to create results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together. In other words, a learning organization functions as human beings cooperating in dynamic systems that are in a state of continuous adaptation and improvement. The concept of the learning organization has received considerable attention recently in literature as firms became increasingly encouraged to leverage learning to gain competitive advantage (Ellinger, Ellinger, Yang, & Elowton, 2002). Learning organization theorists have made the claim that organizational performance effectiveness should be improved by adopting the features described as components of a learning organization (Senge, 1996; Elolton & Kaiser, 2000).

According to Watkins and Marsick (1993), learning in organizations has four tiers which are society, organization, team learning, and employee. Senge's (1990) learning on the other hand has three tiers, which are organization, team learning, and employee. Westbrook's (2002) learning, however, has only two tiers; organization and employee. Employees need to learn from experience and incorporate the learning as feedback into their work tasks. Work-related learning is defined as "the formal and informal education and training adults completed at work or at home to assist them in their current and/or future employment" (Westbrook, 2002, p. 19). The learning organization is underpinned by the logic of the human capital theory, which assumes that the more you have learned (or the higher capacity you have for learning), the more of an asset you will be for your organization. In a human capital formulation, workers are compensated for the use of their critical thinking through higher wages and a higher position (Mojab & Gorman, 2003). The concept of the learning organization is that the successful organization must continually adapt and learn in order to respond to changes in environment and grow.

- Relationship between Learning Organization and Organizational Performance

Adelzadeh, P. et. al. (2014). examined the relationship between the learning and organizational performance at the State University of Tabriz, Islamic Azad Universities and Higher Education Institutes. Their research results show the relationship between personal, group and organization learning level and organizational performance. Also, organization learning level is affected by continuous learning interaction and team learning. In their research work, they determined the significance of the relationship between learning leadership and learning levels in organization. In the case of the relationship between organization relations with environment and learning levels it is high. Kontoghiorghes, C. et. al. (2005) investigated the relationship between learning organization dimension and change

adaptation, innovation and bottom-line organizational performance. They found that the learning organization dimension was the key success factor to get into rapid change adoption, quick product or service introduction, and bottom-line organizational performance. They also found that it was so important to be concerned with open communication and information sharing, risk taking and new idea promotion which are key success factors to learning organization. This is also the case with organizational information, facts, timing as well as the resource availability to conduct a job in organization in order to be professional manner.

Haley, K. and Yuhfen, D. (2011) sought to explain the library human capitals behavior following the concept of learning organization, leadership development, as well as employment development. They used Learning Organization Questionnaire (DLOQ) as the data collecting tool and applied a multivariate analysis of the variance as the data analysis tool. The findings of their research show the significant impact of leadership training and workplace training on the learning organization. The number of leadership and workplace training hours were significantly correlated to the DLOQ higher score. Organizational leaders' skills and leaders' behavior had a strong influence on the organizations' moving towards becoming learning organizations. The number of leadership training hours provided the leadership skills in their organization. In addition, enhancing and developing their leadership skills led to the implementation of learning organization concept. Based on the results, it was obviously that leadership training and workplace training had strongly influenced the learning organization's characteristics.

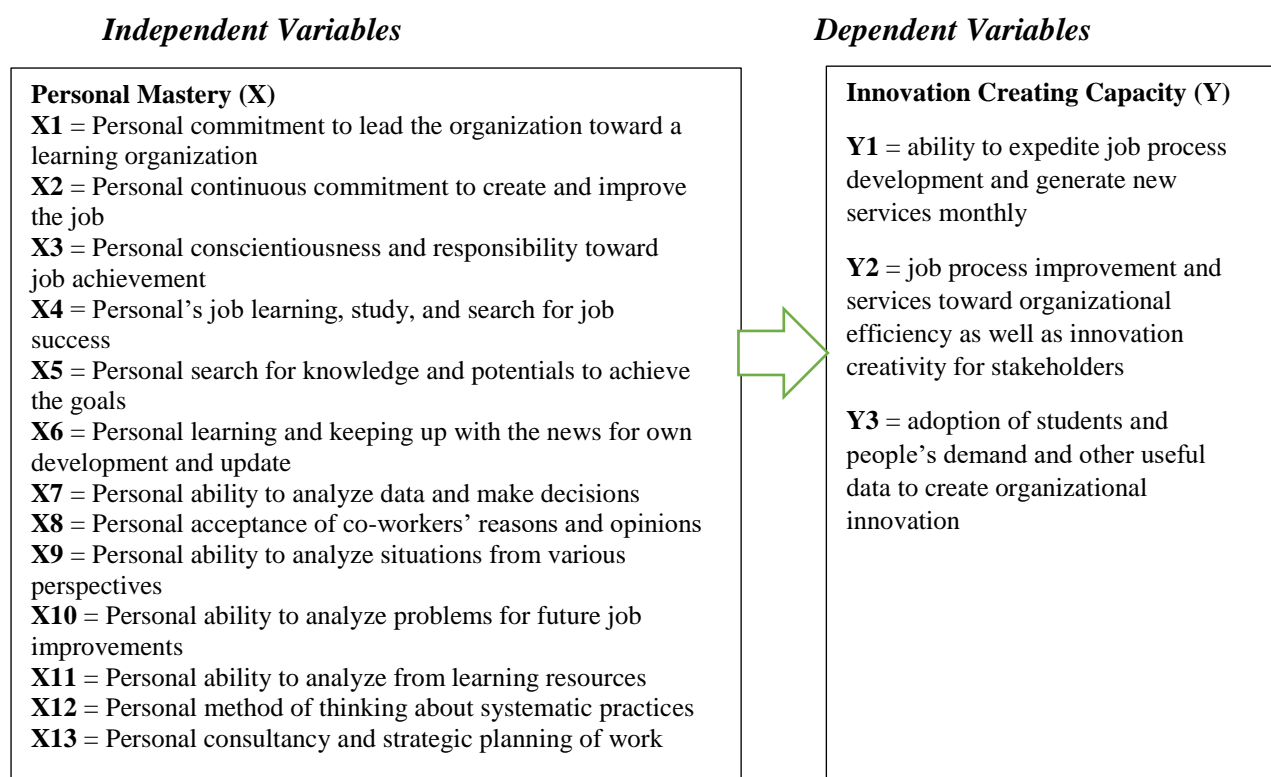
Furthermore, libraries as organizations should encourage and support training in order to improve the characteristics of learning organizations. The implementation practically would lead to the growth of their human capital. Also it is better return of human capital investment. The researchers concluded that moving in the direction of continuous learning and change would be the way for a learning organization to be able to integrate people and the organizational structure to reach this goal. Moralesa, V.J., Montesa, F.L., and Joverb, V. A., (2007) investigated human capital behavior in large and small and medium enterprise (SMEs). They collected primary data from 401 Spanish firms and studied the influence of personal mastery on organizational performance through organizational learning and innovation. They also studied the direct and indirect influence of personal mastery on organizational performance through capabilities of organizational learning and innovation. The results reveal that (i) there was a significant influence of personal mastery on the direct and indirect organizational performances in terms of organizational learning and innovation; (ii) there was a positively significant direct influence and indirect influence of organizational learning on the organizational performance in terms of organizational innovation; and (iii) there was a positive influence of organization innovation on organization performance.

Rajapathirana, J., and Hui, Y. (2018) studied the relationship between innovation capability, innovation type, and firm performance at insurance companies in China. Their aim was to explore the relationship among innovations capacity, innovation type as well as the different viewpoints of firm performances which included innovation, market and financial performance. They developed a research framework by surveying 379 senior managers in insurance businesses and explored the relationship among innovations capacity, innovation type as well as the different viewpoints of firm performances, which included innovation and market and financial performance. They determined that the insurance business had been faced with economic, political, regulatory, legal, social, and technological challenges that created high competition, slowed business expansion and resulted in an excess of capital in China insurance companies.

Advances in communication technology have raised the risk of cyber-attacks and led to the transformation of life style of human live and the risks they face, which they need to alleviate with various insurance products. With the global communication change, insurance companies really needed to adopt their business models and be consistent with those changes. In this high competitive market and changing global economy, innovation was thus considered the key success factor. The researchers concluded that there was a significant relationship between innovation capabilities, innovation efforts and firm performance. Moreover, effective management of innovation capability could deliver more effective innovation outcomes in the insurance industry, which eventually led to the better organizational performance and organizational benefits.

Conceptual Framework

Based on Sege's (1990) five disciplines of a learning organization as expounded above, the conceptual framework can be expressed as follows:



3. Research Methodology

The School of Agriculture and Cooperatives is divided into six divisions, which are (i) agricultural extension, (ii) crop production management, (iii) animal production management, (iv) agribusiness management, (v) forestry and environment management, and (vi) cooperatives and a total of 39 employees work for it (29 as academics and 8 as academic service staff. In light of these numbers, the sample size focused full-time academic and academic service staffs and consisted of 37 employees, 29 academics and 8 persons staff members (2 faculty members were on leave for higher education).

The primary data collection was done via questionnaires and secondary data was collected from official documents and websites. Descriptive statistics was used as arithmetic means and standard deviations while inferential statistics applied multiple regressions. The estimated parameters was applied by Ordinary Least Square (OLS), t-test, F-test as well as the Coefficient of Determination (R^2)

4. Results and Discussion

Table 1 shows the profile of the all the employees of the School of Agriculture and Cooperatives.

Table 1: Profile of Human Capital of the School of Agriculture and Cooperatives

General Information About the Human Capital	Number	Percentage
1. Gender		
Male	15	40.54
Female	22	59.46
Total	37	100.00
2. Age		
Less than 25 Years Old	0	0
25-34 Years Old	6	16.22
35-44 Years Old	12	32.43
More than 45 Years Old	19	51.35
Total	37	100.00
3. Educational Level		
Bachelor Degree	0	0
Master Degree	14	37.84
Doctoral Degree	23	62.16
Post-Doctoral Degree	0	0
Total	37	100.00
4. Position		
Lecturer	9	24.00
Assistant Professor	10	27.00
Associate Professor	18	49.00
Professor	0	0
Total	37	100.00
5. Status		
Government Servant	18	49.00
Officer	19	51.00
Total	37	100.00
6. Duration of Employment		
Less than 2 Years	1	2.70
2-5 Years	5	13.52
6-9 Years	7	18.92
10 – 15 Years	5	13.51
16 – 20 Years	4	10.81
21 – 25 Years	8	21.62
More than 25 Years	7	18.92
Total	37	100.00

As shown in Table 1, 15 employees are males (40.54%) and 22 females (59.46%). A majority of them were more than 45 years old (19 persons accounting for 51.35 percent). Those aged between 33-44 years old accounted for 32.43 percent and the 25-34 years old ones for 16.22 percent. A majority of the employees earned doctoral degrees (23 persons accounted for 62.16 percent) and 14 persons had a master degree (37.84%). A majority of the employees earned the position of associate professor (18 accounting for 49.00 percent), followed by that of assistant professor (10 persons accounting for 27.00 percent) and lecturer (9 accounting for 24 percent). 18 of the staff members are government servants (49.00%) and 19 officers (51.00%). 8 of them have been with the school for more than 20 years (21.62% of the staff), 4 for more than 15 years (10.81%), 7 for more than 25 years (18.92%), 5 for more than 10 years (13.51%), 7 for 6 to 9 years (18.92%), and the others between 2 to 5 years.

Table 2 shows the relationship between personal characters and organizational performance of the school of agriculture and cooperatives.

Table 2: Relationship between Personal Characters and Innovation Creating Capacity Y1

Dependent Variable: Y1			
Independent Variables	Estimated Parameters	T-Value	P-Value
(Constant)	-14.619	-24.9	0.0001**
X1	2.816	62.603	0.0001**
X2	-0.774	-10.048	0.062
X3	-1.239	-10.583	0.0877
X4	2.842	32.561	0.0001**
X5	-0.109	-2.489	0.013
X6	-0.957	-21.722	0.045
X7	-1.283	-0.16	0.153
X8	3.454	34.338	0.0001**
X9	-1.022	-24.431	0.541
X10	2.982	69.534	0.0001**
X11	-1.475	-26.302	0.0976
X12	-3.828	-40.746	0.0654
X13	1.043	36.154	0.0001**
F = 1478			
R-Square = .979			

**Statistically significant at the 0.01 level.

Computed by the author for this study

As Table 2 shows, personal character traits X1, X4, X8, X10.X13 of the employees of the School of Agriculture and Cooperatives have a positive relationship with innovation creating capacity to expedite job process development and generate new services monthly (Y1). These personal character traits were the personal commitment to lead the organization toward a learning organization (X1), the personal's job learning, study, searching for job success (X4), the personal acceptance of co-workers' reasons and opinions (X8), the personal skills analyzing problems for job improvement in the future (X10), and the personal consultancy and strategic planning of work (X13).

Table 3: Relationship between Personal Characters and Innovation Creating Capacity Y2

Dependent Variable: Y2			
Independent Variables	Estimated Parameters	T-Value	P-Value
(Constant)	-30.114	-151.401	0.0001**
X1	1.731	97.061	0.00001**
X2	0.586	19.79	0.00001**
X3	-5.245	-116.436	0.216
X4	6.049	197.504	0.00001**
X5	1.037	70.341	0.00001**
X6	0.647	31.749	0.00001**
X7	-0.33	-36.377	0.168
X8	4.844	134.166	0.00001**
X9	-0.99	-64.563	0.175
X10	3.342	205.8	0.00001**
X11	-1.181	-48.76	0.116
X12	-5.721	-177.694	0.124
X13	2.317	213.307	0.00001**
F = 158.692			
R-Square = .99			

**Statistically significant at the 0.01 level.

Computed by the author for this study

As Table 3 shows that personal traits of character X1, X2, X4, X5, X6, X8, X10, and X13 have a positive relationship with Innovation creating capacity of job process improvement and services toward organizational efficiency as well as innovation creativity for stakeholders (Y2). In addition to those already mentioned, these personal character traits include the personal commitment to create and improve the job continuously (X2), the personal search for knowledge and potentials to achieve the goals (X5), and the personal learning and keeping up with the news for own development and update (X6).

Table 4: Relationship between Personal Characters and Innovation Creating Capacity Y3

Dependent Variable: Y3			
Independent Variables	Estimated Parameters	T-Value	P-Value
(Constant)	-28.543	0.796	0.00001**
X1	2.074	0.071	0.0001**
X2	0.657	0.118	0.0001**
X3	-4.019	0.18	0.126
X4	5.803	0.123	0.0001**
X5	0.852	0.059	0.0001**
X6	-0.589	0.082	0.123
X7	0.32	0.036	0.0001**
X8	4.626	0.144	0.0001**
X9	-1.039	0.061	0.114
X10	3.632	0.065	0.0001**
X11	-1.277	0.097	0.112
X12	-6.115	0.129	0.11
X13	1.731	0.043	0.0001**
F = 966.52			
R-Square = 0.985			

**Statistically significant at the 0.01 level.

Computed by the author for this study

Table 4 shows that personal traits of character X1, X2, X4, X5, X8, X10, and X13 have a positive relationship with the innovation creating capacity of adoption of students and people's demand and other useful data to create the organizational innovation (Y3). Employees, working at the School of Agriculture and Cooperatives have been with the university for a long time and almost all of them have a lot of experience as they are more than 45 years old. In order to lead the school toward becoming a complete learning organization, the school needs to take into consideration all the personal traits of character of the employees and encourage them to generate innovation creating capacity.

In terms of personal mastery, since the people working as academic staff at the School of Agriculture and Cooperatives, have gained work experience of more than 20 years, they have a long-term focus and the system map of their work lead to the creativity of innovation. This finding is consistent with Senge (1990), Yang, & Elowton, (2002), whose studies show a positive relationship between innovation creating capacity expediting job process development and generating new services monthly. This also includes the personal commitment to lead the organization toward learning organization. This reflects the solid organizational management of the school. These research outcomes are consistent with the work of Adelzadeh, P. et. al. (2014), Kontoghiorghes, C. et. al. (2005), and Haley, K. and Yuhfen, D. (2011). Also the research outcome shows a positive relationship between innovation creating capacity improving the job process and services toward organizational efficiency and the personal skills analyzing problems for job improvement. This is consistent with Haley, K. and Yuhfen, D. (2011), and Moralesa, V.J., Montesa, F.L., and Joverb, V. A., (2007).

The research result shows a positive relationship between innovation creating capacity adopting students and people's demand and other useful data to create the organizational innovation and the personal searching for knowledge and potentials to achieve the goals. This research outcome is consistent with Rajapathirana, J., and Hui, Y. (2018).

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List of Dependent Variables

Dependent Variable	Variable Name
X1	the personal searching for knowledge and potentials to achieve the goal
X2	the personal commitment to create and improve the job continuously
X3	the personal conscious mind of job responsibility toward the job's achievement
X4	the personal's job learning, study, searching for job successfulness
X5	the personal searching for knowledge and potentials to achieve the goal
X6	the personal learning and catching up the news for their own develop and update
X7	the personal data analysis and job decision
X8	the personal admitted to co-workers' reasons and opinion
X9	the personal ability of situations' analysis from several aspects
X10	the personal skills of problem analysis to job improvement in the future
X11	the personal ability of data analysis from learning resources widely
X12	the personal method of thinking to systematic practices
X13	The personal consultancy and strategic planning of work

List of Independent Variables

Independent Variable	Variable Name
Y1	the ability of job process development expedite and generate the new services monthly
Y2	the job process improvement and services toward organizational efficiency as well as innovation creativity for steak holders
Y3	the adoption of students and people demand and other useful data to create the organizational innovation

BOOK REVIEW

Marketing for Competitiveness: Asia to the World: In the Age of Digital Consumers. Philip Kotler, Hermawan Kartajaya, and Hooi Den Huan. Singapore: World Scientific, 2017. 288 pp. ISBN 978-981-3201-96-5 (pbk).

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This book is one among a very few that were written recently by internationally recognized marketing scholars and were specifically focused on ASEAN Plus Three markets (i.e. Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, plus China, Japan and South Korea) in the context of digital consumers in the today's marketplace. The authors of this book are Philip Kotler, Distinguished Professor, Kellogg School of Management, Hermawan Kartajaya, Founder of Asia Marketing Federation and Founder and Chairman of MarkPlus, Inc., and Hooi Den Huan, Director, Nanyang Technopreneurship Center, all of whom are also the co-founders of Philip Kotler Center for ASEAN Marketing. This book addresses the key challenges for businesses to stay competitive in the rapidly evolving 21st century or the so-called Asian Century. The main content is organized into five sections, Preface:

The Anatomy of Change, Part I: Marketing Is Transforming?, Part II: Marketing Is Moving?, Part III: Marketing Is Creating?, and Postface: Glorecalization Mindset: Asia to the World! The book also provides a list of useful summary notes at the end of each section. The preface section describes the anatomy of change as the dynamic business landscape mainly driven by five elements – technology, political legal, social-cultural, economy, and market – where technology is the first primary driver of change to begin the dynamic as a result of digitalization in most Asian countries supported by the development of its digital ecosystem, including infrastructure and support services, network operators, handset manufacturers, distributors and retailers, content, applications, and other services. For instance, most countries in Asia are now flooded with inexpensive smartphones from China which evidently fueled rapid adoption in Malaysia, Indonesia, the Philippines and Vietnam. Consequently, digitalization has enabled machine-to-machine (M2M) versus human-to-human (H2H) interactions in this region like never before.

The market is also an ultimate driver as the new competitors have been arising in many Asian industries, for example, many new players offering mobile payment, peer-to-peer lending, online-only bank services in Asia's banking industry. These new competitors are such as Tencent's WeBank in China and Telenor's Easypaisa in Pakistan. Therefore the customer path in the connectivity era has shift from the traditional 4A stages (aware, attitude, act, and act again) into the 5A stages (aware, appeal, ask, act, and advocate). The Part I section explains the historical transformation of marketing from Marketing 1.0 (the product-centric era), Marketing 2.0 (the customer-centric era), and Marketing 3.0 (the human-centric era) and subsequently introduces the new marketing approach as Marketing 4.0 (the New Wave era), i.e. thriving on the technological disruptions while maintaining the human-centric approach.

To overcome the dilemma of speed versus accuracy in the New Product Development (NPD) process, the Cooper's Stage-Gate model, typically comprising four to six stages each of which has its gate as a checkpoint prior to the next, can be useful for Asian enterprises or SMEs. Xiaomi and Fujifilm are among the successful examples of product innovation in Asia. From the innovation, companies need to connect with Asian digital consumers by engaging their customers at a moment where their target consumers search for information or what Google calls the Zero Moment of Truth (ZMOT). Many successful businesses also create emotional contents worth sharing for digital consumers, such as the Thailand's famous "sadvertising" appeal of Thai Life Insurance commercial campaigns. Asian companies also need to win from human-centric perspective by integrating their social and business objectives. They could harness digital technology to connect and collaborate with other stakeholders to create social impact for the concerned communities.

The Part II section describes in more detail about the New Wave marketing concept which moves from the Positioning-Differentiation-Brand (PDB) triangle to the Clarification-Codification-Character (Triple Cs) concept. Firstly, from positioning to clarification, companies need to progress from a company-driven positioning concept which focuses on a single message, company-oriented content, and one-way communication to a clarification concept which embraces involving multidimensional messages, customer-oriented content, and multiple-way communication. Unilever successfully promoted its Paddle Pop ice cream campaign among Indonesian kids with online entertainment portal and offline clarification in the form of theme parks and activation events to clarify who Paddle Pop is.

Next, from differentiation to codification, as company information can be accessed by consumers from a variety of sources, a successful company needs to internalize its brand DNA throughout its organization which is clearly beyond the marketing department so that every employee understands the company from inside and out as the onion model of codification, comprising three interconnected layers of shared values and substance, systems and leadership, and symbols and styles, respectively. Malaysia's CIMB bank and Indonesia's Garuda Indonesia are among the ASEAN companies who successfully employed brand DNA codification to their organizations. Lastly, from brand to character, a brand needs to be more like a human with a "branding with character" model with six aspects, i.e. physicality, intellectuality, emotionality, sociability, personability, and moral ability. Tesla Motors, Inc., for instance, has managed to address these aspects with its brand upon the entrance to the Asian market.

The Part III section discusses the whole set of competitive marketing architecture concerning three dimensions: strategy, tactic, and value. From the traditional concept of S-T-P (Segmentation-Targeting-Positioning) marketing strategy, segmentation should be adapted into communitization since technology has triggered a sharing economy in which consumers also actively rely on other people from both real and virtual circumstances in making decisions about products to purchase or use. Key factors to consider marketing strategy should change from segmentation using geography, demography, psychography and behavior to communitization using purpose, values, and identify.

Moreover, targeting should become confirmation where the purpose, values, and identify of the company match those of its customers. To generate a successful community confirmation, a company needs to consider relevance, level of activity, and the number of community networks (NCNs) in addition to the four traditional criteria, i.e. market size, market growth, competitive advantage, and competitive situation. In the tactic dimension of the New Wave marketing architecture where differentiation becomes codification, the new marketing mix elements should be transformed from the traditional 4Ps: product, price, place, and promotion to 4Cs: co-creation, currency, communal activation, and conversation, respectively,

in order to create value engagement with digital consumers. As such, selling is now commercialization of a company's market place, prospect company, internal, and customer networks. From the value dimension of the New Wave marketing, brand is character (a value indicator), service is care (a value enhancer), and process is collaboration (a value enabler). The Oberoi Hotel Group is one successful case who refocused its service operations from following standard operating procedures (SOPs) to using values-based principles (VBPs) as a general guideline for all employees called "The Oberoi Dharma."

Lastly, in the Postface section, the book prominently features ASEAN and other Asian marketing best practices from the local level (LPDR's Lao Airlines, Mongolia's UFC Group, Brunei's Hua Ho Department Store, and Macau's Macau.com), regional level (Singapore's Zalora, Cambodia's ACLEDA Bank, Vietnam's Vinamilk, and Maldives' Karumba Maldives), and global level (Philippines' Jollibee, South Korea's Samsung, and Japan's Honda). These exemplars can depict the so-called glorecalization formula of today's Asian companies who embrace global/regional/local mindset into their character (the new brand), care (the new service), and collaboration (the new process).

This book provides an up-to-date perspective of essential marketing concepts that fit the today's context of modern Asia as well as digital consumers in these countries. The authors clearly describe the historical notions and focal points of transforming marketing from 1.0 to 3.0 with key challenges and implications to pave the way towards the marketing 4.0 or New Wave marketing era. In the new marketing concept, the change from PDB to Tripple Cs concept is very important and useful for brand strategists and marketers to win hearts of Asian consumers in this era. The new marketing strategy of communitization, confirmation, and clarification elements sound sensible as an augmented version of the traditional S-T-P model in the digital lifestyle context. The 4Cs marketing tactics could also enhance relevance of marketing mix programs in engaging value with digital consumers. Delivering marketing value with care and collaboration seems to be suitable for businesses in many instances as H2H interactions still remain important for Asian consumers.

All the best practices provided in this book are also very useful as a practical marketing guideline to thrive the disruptive digital era in Asia. As such, readers can clearly see real-world case studies of the successful organizations operating in ASEAN countries, as well as other key Asian markets, to understand and appreciate a proper application of each revisited marketing concept in each chapter of the book. Hence, this book is well constructed with up-to-date marketing concepts for today's Asian market and could be used to enhance a perspective of marketing studies in a higher education level for institutions emphasizing on international or Asian markets in the digital era.