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**Transforming Business to the Future**



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# **DISRUPTION AND THE TRANSFORMATION OF INDUSTRIES: THE CASE OF MEDIA AND EDUCATION INDUSTRIES**

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## **Abstract**

What is a disruption? How does a disruption occur? How do businesses transform? How do organizations evolve? This paper attempts to address these questions. In Hindu, Shiva is the god of destruction. In any civilization, there needs to be destruction in order for the civilization to grow. Destructive creation introduces better things for society. This argument is also true for business and technology. Among the fortune 500 companies that used to be in the fortune 500 companies one hundred year ago, only a few still remain, thanks to the creative destruction that fuels economic prosperity. This paper studies how industry evolves, disrupts, and transforms over time. Examples of the industries in this paper include the media and higher education industry. The findings provide lessons learned and guidelines for the industry to deal with and respond to disruption.

**Keywords:** *Disruption, Evolution, Transformations, Disruptive Technologies, Technology Adoption*

## **1. Introduction**

The futurist Ray Kurzweil stated that the first human being who is going to live for a thousand year has already been born (Dobbs, Manyika, & Woetzel, 2016). This statement is very ambitious, but what we see today is the advance of healthcare technology and better living standards, enabling people to live longer and healthier. Since the development of the Internet and mobile telephony, we have witnessed an acceleration of technology, increased connectivity, and a greater degree of connection among trade, capital information, and people. Increased connectivity lead into economic growth (Dobbs et al., 2016). The World Bank has indicated that every ten percent increase of broadband Internet users in any country can lead to a 1.4 percent increase of the country's GDP (Qiang, Rossotto, & Kimura, 2009). Disruptive technologies, such as the Internet, smartphones, social media, e-commerce, and big data have driven economic growth. For example, it took England 154 years with a population of less than ten million to double its economic output per capita; however, it took China only 12 years to do the same thing with more than a population of one billion (Dobbs et al., 2016). Technology is evolving rapidly. In 1990, scientists spent 13 years and \$3 billion to sequence the human genome, but they can do the same thing today in a few hours with less than \$1,000 (Dobbs et al., 2016). Further, disruption can create new business models and destroy existing business models very quickly. For example, NOKIA in 2006 had more than thirty percent of the market share in the cellular phone market. It took only three year after the launch of the iPhone in 2007 to drive NOKIA \ almost completely out of the market. Digitization and mobile Internet access allow both people and business to enjoy the benefit of technological revolution. For example, in 1990, 43% of the world population lived in extreme poverty. In 2016, the number was reduced to only 700 million people (Dobbs et al., 2016).

### *Research Objective*

This paper applies evolution theory, the idea of the diffusion of innovation, and the theory of disruption to explain how the media and education industries have been disrupted and transformed.

## 2. Literature Review

The theories that can explain how businesses evolve and are disrupted and transformed include evolution theory, the theory of disruption, and the diffusion of innovation.

### 2.1 Evolutionary Theory

Evolutionary theory was introduced by Darwin in 1859. This theory proposes that the variability exists in the inheritable traits possessed by the individual organism of a species. This variability brings about differences in the ability of each organism to reproduce in their environment and being able to improve their ability to reproduce can help them to survive and become dominant among their peers. This theory can also be applied to organizational theory by using a firm in a certain industry as the unit of analysis, like an organism. It can be used to explain why some firms can survive through ever-changing environments while others cannot. This ability may stem from the differing ability to adopt themselves to the fast-changing environments in the industry.

This theory began in biological field, but now it can be applied to many other fields concerning human life. That is, those that can best adopt to changes in the environment have greater opportunity to win “the game” they are playing. This is the process of natural selection.

Additionally, evolutionary theory can be used to explain why successful firms cannot last long. Fortune magazine for example created a list of 500 companies that had the highest revenue. These were extremely successful companies. One study compared the fortune 500 firms in 1955 and 2017. The study found that only sixty companies were still on the list (Perry, 2018). Examples of the companies that were on both the 1955 and 1970 lists includes 3M, General Electric, IBM, etc. In fact, the majority of the companies listed in 1955 were not on the 2017 list. A company is like a living organism—the survival of a firm depends on its ability to adapt when there are changes (disruption) in the environment. For example, when MP3 players came out, many music companies went bankrupt because they still relied on the sale of tape cassettes and CDs.

### 2.2 Diffusion of Innovation

This theory seeks to explain how, why, and at what rate new ideas and technology spread. Rogers (1995) stated that diffusion is the process by which an innovation is communicated over time among the participants in a social system. Individuals are seen as possessing different degrees of willingness to adopt innovations and thus it has generally been observed that the portion of the population adopting an innovation is approximately normally distributed over time (Rogers, 1995).

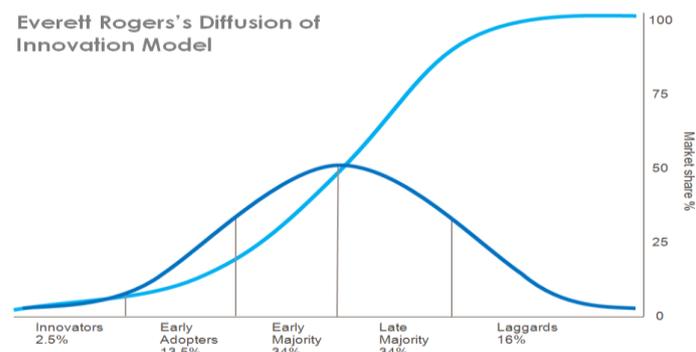


Figure 1: Diffusion of Innovation (Rogers, 1995)

According to Rogers, breaking this normal distribution into segments leads to the segregation of individuals into the following five categories of individual innovativeness (from earliest to latest adopters): innovators, early adopters, early majority, late majority, and laggards (Rogers, 1995). The members of each category typically possess certain distinguishing characteristics as shown below:

- Innovators are willing to take risks, have the highest social status, have financial liquidity, are social, and have the closest contact with scientific sources and interaction with other innovators.
- Early adopters have higher social status, financial liquidity, advanced education, and are more socially forward than late adopters. They are more discreet in their adoption choices than innovators.
- Early majority have above average social status, contact with early adopters, and seldom hold positions of opinion leadership in a system.
- Late majority are typically skeptical about an innovation, have below average social status, little financial liquidity, are in contact with others in the late majority and early majority, and exhibit little opinion leadership.
- Laggards typically tend to be focused on "traditions," have the lowest social status, the lowest financial liquidity, are oldest among adopters, and are in contact only with family and close friends.

The diffusion of innovation theory is useful for marketers and also innovators in terms of providing concise information about new products to target customers. The information leads target customers to be interested in their innovation and to actively seek related or detailed information. Then, the individual assimilates the concept of the change and weighs the advantages/disadvantages of using the innovation and decides whether to adopt or reject it. The decision stage is the most difficult at which to acquire empirical evidence. The major limitation of DOI theory is that this theory does not have exact indicators to measure each step of the decision-making process of diffusion. As a result, it is difficult to identify who would be placed in each category of individual innovativeness. It can be seen then that diffusion is the “process by which an innovation is communicated through certain channels over a period of time among the members of a social system.” On the other hand, an innovation is “an idea, practice, or object that is perceived to be new by an individual or other unit of adoption,” and “[c]ommunication is a process in which participants create and share information with one another to reach a mutual understanding” (Rogers, 1995).

### *2.3 Disruption*

Disruption is the process by which an emerging firm with fewer resources can effectively challenge an existing large firm. A large firm usually focuses on improving its existing products or services for existing customers and can successfully address the needs of some customer segments while ignoring other segments. An emerging firm can be disruptive if it answers the need to overlook segments by providing suitable functionalities and usually at much lower prices. In the beginning, an emerging firm is often ignored by a large incumbent, while a large incumbent focus on existing customers. When mainstream customers begin to adopt a new entrant’s products or services in a large volume, disruption already has taken place (C. Christensen, 2013). In other words, disruption creates a market that has not existed before.

Initially, disruptive innovations are considered inferior by the mainstream customers that use the incumbent’s products or services; however, when the quality of disruptive innovations has improved, or the prices have been reduced, customers begin to adopt the innovations.

The impact of disruption is not about the product but concerns the business model, and the disruption process can take a long time. This is why incumbents often overlook an emerging firm that appears with disruptive technologies. For instance, when Netflix began its service in 1997, the service was not attractive to existing VDO rental customers. The initial service began by delivering VDOs through mailing services and it took several days for the customer to receive the VDO. Nevertheless, when Netflix improved its service by allowing customers to rent movies over the Internet, the service became appealing to mainstream customers because Netflix offered all you can watch, on demand, and low-cost services (C. M. Christensen, Raynor, & McDonald, 2015). In addition, disruptors usually have different business models from the incumbent. The success of both UBER and iPhone for example did not come from their products or services but from the platform business model. The theory of disruption states that when a new entrant attacks the incumbent head on by offering better products or services, the incumbent will respond with its own innovations to defend its market. The incumbent will either “beat” the new entrant by offering better products or services, or it will acquire the new entrant (C. M. Christensen et al., 2015). In his study on the disk drive industry, Christensen found that only six percent of new entrants succeed, and he argues that the reason an incumbent cannot move fast is because the company’s processes often focus only on existing core customers. As a result, this is why incumbents are often ineffective when it comes to disruptive innovations (C. Christensen, 2013).

Clayton Christensen’s “The Innovator’s Dilemma” suggests that a successful disruptive force must meet the following criteria (C. Christensen, 2013).

1. A disruption must contain enabling technology. The disruption might introduce a new technology or apply the existing technology in a new way.
2. A disruption must create a new business model or a new market segment, and the disruption should change the way in which the business operates and create a new demand for products or services.
3. A disruption must change or create a new value chain. Here the disruption introduces a new process in the value chain and destroys the existing process.

#### *2.4 Digital Transformation*

Disruptions such as Internet, mobile broadband, social media, and the Internet of things have changed many industries and business models, and these disruptive technologies have changed how people connect and communicate. Many studies have indicated that companies that use digital technology outperform their peers (Westerman, Tannou, Bonnet, Ferraris, & McAfee, 2012). Additionally, the environment of doing business has also changed. For example, the media that most consumers use are no longer the mass media such as TV, newspapers, magazines, and the radio. Consumers today spend most of their time on social media and smartphones. In order to survive, companies need to digitally transform, and digital transformation can be defined as the effort to adopt disruptive technologies into the company’s practice and operations (Solis, 2015). Organizations use digital transformation to change the way in which they interact with customers and employees. With the introduction of new technologies and fierce competition, organizations today are forced to update their legacy technology and business models to reflect how the business environment and the customers’ behaviors are changing (Solis, 2015).

## 2.4.1 Examples of Disruptive Technologies (Gleason & McCallum, 2018)

### 2.4.1.1 Cloud Computing

In the past, companies had to invest their own IT resources such as buying a server, data storage, and software. The cloud revolutionized how a company uses IT services however by changing the way in which a company acquires IT resources. The use of the cloud makes it possible for a company to access on demand services such as software, hardware, and computing power. In addition, the cloud allows a company to “rent” IT resources instead of buying them. This opens up opportunities for small business to be able to access expensive hardware and software without having to buy these resources.

### 2.4.1.2 Predictive Analytics, Artificial Intelligence and, Machine Learning

So many data are used in businesses today, and these businesses use technologies such as big data and predictive analytics to identify, predict patterns, and help us make better decisions. The predictive analytics can answer the questions “How many products do we expect to sell next month?,” “Is the flight going to arrive on time?” Machine learning can help a company discover untapped patterns in mountains of data. For example, both Amazon and Netflix use machine learning as a recommendation engine that can suggest products or movies based on the customer’s past behavior. Artificial intelligence (AI) can replace many human activities that can be done repeatedly. In the future, there will be many jobs such as accountants, financial advisors, and clerks that will be replaced by AI.

### 2.4.1.3 Multi-Side Market

In a multi-side market, there are at least two parties of people that would like to meet, and a middleman that manages a platform for allowing this to happen. The role of the middleman is to attract people from parties, the demand and supply sides. The value proposition for a middleman is to provide an ecosystem for the supply to meet with the demand (Gleason & McCallum, 2018). Examples of multi-side markets include Uber and Airbnb. For Uber, one side is the passenger and the other side is the car owner. For Airbnb, one side is the guest and the other side is the home owner. Uber has disrupted taxi services, while Airbnb has disrupted the hotel and resort industry.

## 3. Patterns of Disruption

### 3.1 Disruption is temporary

Before 1990, people used to use paper road maps. They were large and awkward as well as difficult to read. In 2000, Garmin introduced handheld GPS devices and sold three million units while the sale of paper road maps sharply declined. However, in 2009, Google introduced Google Maps, which allowed smartphone users to navigate and was free. Since then, the sale of Garmin GPS devices has declined (Downes & Nunes, 2014). Currently, mapping applications have become the default application for any smartphone.

### 3.2 The first mover does not always have an advantage. Timing is everything.

Many innovations have not been successful because they came out at the wrong time. For example, in 1990, Apple launched the Newton, the first PDA, but it was not adopted very well because there was no Internet and the software industry was still immature. In contrast, Jeff Bezos, the founder and CEO of Amazon, waited for the launch an e-reader. Bezos chose to learn from the failure of other companies such as Sony, and then he identified the product’s limitations such as short battery life, insufficient storage, and limited screen size. Then, in 2007, after learning about all of the mistakes that other companies had made, Bezos

launched the Kindle reader which became a product superior to the rest of the e-reader devices (Downes & Nunes, 2014). In addition, the launch of Kindle came at the right time with the introduction of the 3G network, which allows users to download books through Wi-Fi and cellular networks.

### *3.3 With disruption, new jobs will be created while some jobs will be replaced.*

The result of the advancement in technology will create uncertainty in terms of how jobs will be developed. The jobs that can be replaced by disruptive technologies are not only low-skilled jobs; high-skilled jobs will also be replaced by new technologies (C. Christensen, 2013). The WEF has reported that the top ten skills in 2020 (Forum, 2016) will be the following:

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgement and Decision-Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

We can see from the report that the skills required for the future are not “hard skills” such as mathematics, computer programming, and language skills, but rather “soft skills” such as complex problem solving, critical thinking, and creativity. Hard skills can be easily replaced by computer algorithms and artificial intelligence. As a result, the education systems today should cultivate more soft skills as knowledge has now become less important than skills. Companies do not want people that *know* but rather people that can *do*. This is why we see the declining trend in degree enrollments at many universities.

### *3.4 Analysis of the industries*

This study analyzes the media and education industries, as these industries have been disrupted by technology and innovations. The following section describes how both industries have been disrupted, have evolved, and have been transformed.

### *3.5 Media Industry in Thailand*

No industry has been affected by digital technologies more than the media industry. Especially, the print media around the world have been declining sharply. In the past, in order to consume media content, people needed to access the content through the television, radio, newspapers, and magazines. Today, people can access all of this content through their smartphones. The power of the media has shifted from the mass media to social media. In the past, the mass media controlled all the contents, and the content was created and managed by a group of mass media companies. In 2018, Thailand had a population of 69 million people, and there were 57 Internet users accounting for 82% of the population. Further, there were 51 active social media users or 74% of the population. One study found that Thai people spend 9 hours and 38 minutes daily using the Internet, 3 hours and ten minutes daily using social media, and 4 hours and 3 minutes daily VDO streaming (Marketingoops, 2018). Additionally, advertising is moving from traditional advertising to digital or Internet advertising. Traditional advertising is the most recognizable form of all marketing and is a non-digital

way of promoting the product or service of the business entity. These forms of advertising include television, radio, magazines, and newspapers. Digital advertising, sometimes called Internet marketing, on the other hand, is when businesses reach consumers through email, social media, search engines, and mobile applications for their promotional advertisements (Webopeida, 2018). A survey of Positioning magazine in Thailand in 2017 revealed that the advertising budgets for television, radio, newspapers, and magazines were reduced from 2016 to 9.33%, 17.26%, 18.76%, and 35.98% (Positioning, 2017). The reduction of advertising budgets accounted for 26,036 million baht in 2017 (Positioning, 2017).

In addition, the expectations of consumer have also changed. Consumers want to consume media content anytime and anywhere; they do not have the patience to wait for the contents. This is why Netflix was able to beat Blockbuster. Using Netflix, people can watch millions of movies and TV shows at anytime, anywhere, and on any device. Lorenzo Zanni, the lead analyst at the International Trade Association for Broadcast and Media Technology (IABM) stated the following regarding today's viewers: "Rather than a broadcaster 'pushing' content it selects out to viewers for them to watch at scheduled times on a TV set, the viewers are now increasingly in charge – 'pulling' whatever content they want to consume from whichever media organization has it, at whatever time suits them and on whatever device they want to watch it" (James, 2018). Tony Emerson, Microsoft's managing director for Worldwide Media and Cable, stated that "[t]he industry has to move from mass media to personalized media." He further indicated that "[p]rime time is a thing of the past. Now consumers can watch whatever they want, when they want. Instead of releasing an episode of a series per week, many broadcasters are making a whole boxset available. It's an interesting change and presents a number of challenges" (James, 2018). As a result, media companies have had to change their delivery model from the broadcasting to the personalized model. Media companies need to develop digital content and allow people to personalize both the content and channels or devices that they can use to access this content, and this content must be able to be accessed using variety of platforms and devices. Media companies can no longer wait for customers to access their content—they must tailor make their contents based on the customers' preferences.

#### **4. Education Industry**

In 1997, Peter Drucker, the management guru, mentioned that "thirty years from now the big university campuses will be relics" (Beller & Or, 1998). In addition, Clayton Christensen, the innovation guru, stated that "In 15 years from now half of US universities may be in bankruptcy" (Suster, 2013). Higher education has been in the middle of radical disruptive change. The degree or certificate has been a major value proposition for colleges and universities; however, this value proposition has been challenged by new alternatives of education. In the past, the value of a degree was that it represents knowledge, skills, and competence, but this assumption has been challenged with the onset of online media. These online media include massive open online courses (Mooc), Mooc, such as Coursera, EdX, Udemy, and MIT Open Course Ware where all students can learn and develop their skills anywhere and anytime. Websites such as Degreed and Accredible allow students to enroll in online courses and post-project work, and websites such as Dribbble allow student to show their work to prospective employers. Further, sites such as GitHub allow students to store their codes while other software engineers can review and evaluate their work, work that indicates the status and skills of developers (Staton, 2014).

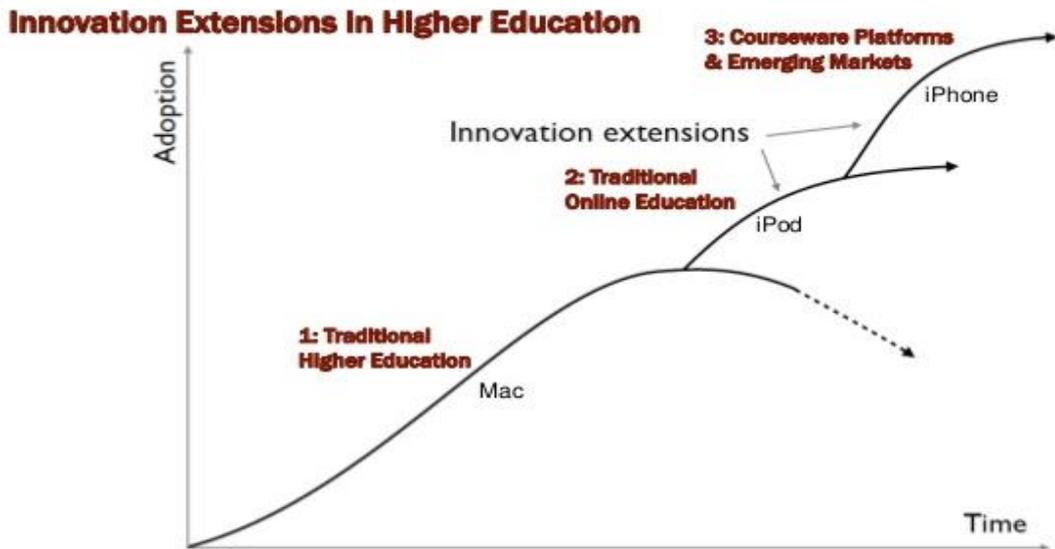


Figure 2: How higher education has adopted disruptive technologies (SEARS, 2015)

Sears (2015) has described how disruptive innovations affect higher education (See Figure 2). The first wave was the adoption of technology in traditional higher education. During this phase, universities adopted technology such as e-Learning combined with their traditional education. The second wave was the introduction of online education, such as online universities and online degrees. The third wave was the creation of courseware platforms or Mocc (Massive open online courses) such as Courseara and Edx. The fourth wave was the use of technology such as courseware and online education for emerging markets (SEARS, 2015).

### Adoption Lifecycle of Online Education

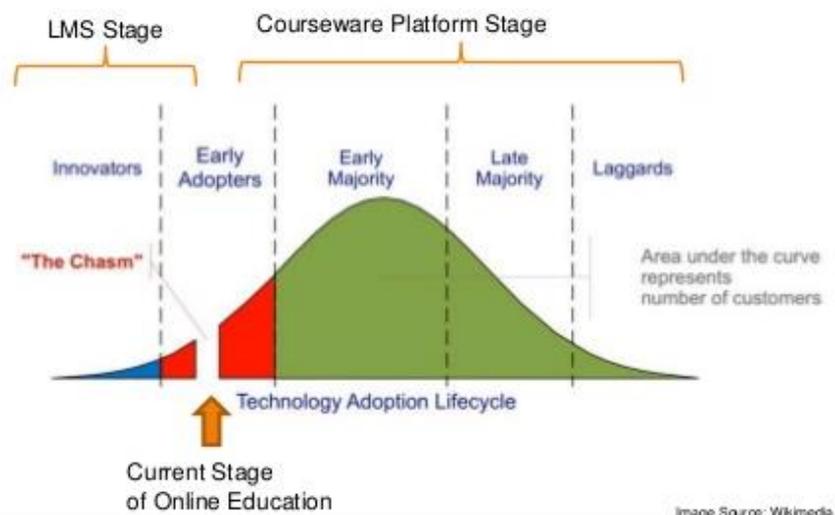


Figure 3: Adoption Lifecycle of Online Education (SEARS, 2015)

When using DOI theory to analyze the education industry, Sears (2015) suggested that the current stage of online education is in the early adopter phase (SEARS, 2015). He predicted that courseware platforms would enable adoptions during later stages.

The market demand has shifted from knowledge to skills. Employers now are concerned more about what the candidate can do rather than what they know. Interestingly, one study found that some companies avoid candidates with advance degrees because they represent an overinvestment in education that results in high salary demands (Staton, 2014). Further, some companies do not trust the quality of degree education. As a result, they create their own training programs or universities such as Google, SAS, Microsoft, Amazon, and the Charoen Pokphand Group.

In order to deal with disruption, universities and colleges need to change their paradigm from providing knowledge to developing skills for students, and the role of the classroom needs to be changed. The classroom should not be a place to provide knowledge anymore because students can access knowledge for free or at low cost with online platforms such as YouTube, Tedtalk, courseara, Lynda.com, or Udemy—students do not have to go to the classroom for knowledge anymore. Not only that, but some lectures online might be better than class lectures. This is why the role of the classroom needs to be changed. One solution would be the use of the “flip classroom,” which is sometimes called the inverted classroom, a changed model of the classroom by moving the lecture outside the classroom and moving homework and project practice into the classroom (Strayer, 2007). Further, teachers have to change their roles from lecturers to facilitators or coaches in order to help students develop important skills in class. Another solution for higher education is to develop online classes or online degrees that would allow students to study from anywhere, anytime, and with any device. Students today demand flexibility so that they can study and work at the same time. Many top university in the US, such as New York University (NYU), the University of California, Berkeley, and Carnegie Mellon University, are already offering online degrees for both graduate and undergraduate students (Tucker, 2018). Finally, higher education might have to change its business model. For example, education programs should be geared toward life-long learning because people need to learn new skills and adapt to disruptive innovations. The end of education should not be the degree. For example, National University of Singapore has created a program called NUS Lifelong Learners or L<sup>3</sup> for short. This program allows 288,600 alumni to continue their education and training, and the alumni can take any course at the graduate or undergraduate level to update their skills (Times, 2018).

Table 1 summarizes the analysis of how the media and education industries have been disrupted and transformed.

Industry	Destruction	Disruptive forces	How industry was transformed
<b>Media Industry</b>	Printed Book Television Radio VDO Rental	Digital Content, Social Media, Streaming VDO and Music VDO on demand	Digital Contents Social Media Contents Multi-platform
<b>Education</b>	Degree Knowledge	Mooc, Courseware, online degree	Online University Flip Classroom Open Courseware Life-Long Learning

*Table 1 the analysis of how the media and education industries have been disrupted and transformed.*

## 5. How to respond to disruption

Zeebroeck and Bughin (2017) have suggested three strategies that a company can use to respond to any digital disruption (Bughin & Van Zeebroeck, 2017).

1. Creating new customer segments. A company facing disruption should focus on creating new customer segments rather than guarding existing customers. For example, Amazon started with a bookstore online, but it later expanded into e-reader and cloud services. The media industry needs to expand its delivery channels to multiple platforms and devices, and the education industry and universities and colleges need to expand to new customer segments, for example life-long training programs, courses for senior citizens, and partnerships with emerging markets.
2. New business models should be developed. Innovative firms are experimenting with their business models all the time. For example, GE has a motto “Destroy Your Business (DYB)” where GE encourages employees to experiment with new business models. Google on the other hand allocates employee time at a ratio of 80/20. Eighty percent of employee time is spent on day-to-day responsibilities, while 20 percent of their time is spent on new projects or new businesses that can create new business models for Google. The implication for media and education industries is that they need to rethink their business and be willing to change or adapt quickly. For example, the media industry might try a subscription model for music or newspapers, and for the education industry, universities might expand its business to online platforms or offer some content for free and charge premium for classroom training.
3. The value chain of firms should be reassessed, redefined, and reinvented. For instance, Netflix changed the value chain of VDO rental stores by allowing customers to rent VDOs over the Internet. Both Microsoft Office 365 and Adobe Creative Cloud changed the value chain of their software delivery from buying the software to renting it. Additionally, the media industry might change its value chain to offer content for free and earn revenue through other means, such as advertising or affiliated marketing. For the education industry, the classroom might change from providing knowledge to developing skill sets, and the university might provide online courses and online certificates for those that complete them.

## 6. Conclusions

This study aimed to address what disruption is, how it happens, and how business evolves and transforms. This study used examples from the media and education industries in order to describe how both industries have been disrupted and how the companies in both industries must evolve and transform. The study provides both academic and practical contributions. In terms of the academic contribution, this study provides a description of how disruption occurs and how industries—both media and education—have been transformed over time. Regarding the study’s practical contribution, it can be used as a guideline for any industry to deal with and respond to disruption.

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# THE FACTORS IMPACT AUDIENCES' BEHAVIOR ON USAGE INTENTION TOWARD LIVE-STREAM SERVICE

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## **Abstract**

In the recent years, a number of audiences are watching channels through live streaming platform, and the development of live-stream service has increased rapidly. As the phenomenon of social live stream service (SLSS) has been a global economic, audiences' behaviors are likely to change. Based on the Flow theory and TAM, this paper aims to address the motivating factors affecting on audiences' behavioral intention toward SLSS. The researchers applied partial least squares equation modeling on online survey questionnaires of 369 participants. Our results show that the constructs from both Flow and TAM theories have a significant impact audiences' behavior on usage intention. This study contributes to future studies on live streaming as well as development of the live-stream industry.

**Keywords:** *Live-Stream, Flow Theory, TAM Theory, Entertainment, Endorsement, Co-Experience.*

## **1. Introduction**

In the past decade, the rise of social media has brought significant changes and opportunities for both corporate and social communication. Internet users are using many forms of social media to communicate and entertain with basically no limitations in terms of how, where and when they can interact with contents. In today's fast-paced world, the availability of the Internet and high-quality camera are ready to provide a new platform: Live Video Streaming or Social Live Stream Service (SLSS), which the audience would have a chance to "visit" your latest events just by turning into your broadcast, ask questions via a chat function and get immediate responses.

In particularly, SLSS allows users to broadcast video content, as well as watch others broadcasting in the real-time, while allowing viewers to create, socialize around that content, and providing complementary interaction features, e.g. chat rooms or the possibility to encourage streamers by sending likes or even virtual gifts. In general, the live-stream activities are supported by streamers who broadcast their video and audio contents occurring immediately, and viewers can interact with the streamer and others participants in this content via chat functions (M Hu, M Zhang & Y Wang, 2017). These live streams allow users to give their suggestions or even play a key role in the outcome of content which can keep users engaged and higher recall of topics and advertising. As its advantages, Chinese users exploited a new opportunity, which is called "showroom performances". There are the places where an individual streamer/ broadcaster hosts and performs diversity activities such as singing, dancing, musical instruments, and talk shows.

Because the available platforms are diverse, its prosperity has been observed (T Smith, M Obrist & P Wright, 2013). For instance, since its establishment in 2011, Twitch- the popular platform for gaming live streaming has greater than 1.5M active streamers and in excess of 100M guests per month (Needleman, 2015).

After Twitch, Facebook and YouTube have well provided live video streaming in 2016. According Vimeo's statistics that 81% of internet and mobile users watched live video in

2016 and 78% of online audiences were already watching video on Facebook Live. The growth of live streaming in China increased rapidly with an assessable 5-billion-dollar industry in 2017, in result of over 200M viewers watched streamers performing live each night on many live streaming platforms. Chinaidr.com (2017) refers to live-stream as a big deal in future.

According to Nielsen Vietnam data, TV viewing time of the 25-34 years old has fallen by 25.6% in the past five years, which is a disappointing number of the television industry. In contrast, results from department of IT indicate that up to 58% of 1,000 surveyed users spent the average time on social media more than 3 hours per day. In March 2017, Facebook's live stream feature was born and became one of the most advanced content platforms in the digital age [3]. On the trend these days, the phenomenon of live-streams has changed audiences' behavior obviously. The interactive live stream of Facebook, Instagram and YouTube is a new form of attention, attracting a lot of attentions in the recent years. Then it is important to study audience's preferences and their behavior in order to find out what makes them watch live streams. Hence, authors intend to address the following research questions in this study:

RQ1: What are the motivating factors of watching live streams in Vietnam?

RQ2: How do these factors relate to each other?

In this study, the authors use the Flow Theory and the Technology Acceptance Model (TAM) to examine Vietnamese audience's behavioral intention toward the social live stream service (SLSS). This phenomenon is explored based on two theories for the following two reasons. First, the flow theory allows us to take the fun and entertainment motivation as perceived enjoyment and the capability of owning by users as perceived control. The authors propose that entertainment, endorsement and co-experience have a positive impact on audiences' enjoyment on watching SLSS. Concentration also used to describe a state in which "people are so involved in an activity that nothing else seems to matter" (Csikszentmihalyi, 1975). Moreover, previous researchers have found that TAM including perceived ease of use and perceived usefulness, which is the prosperous model to show the acceptance of user toward new technology usage.

## **2. Literature Review**

### *2.1 Flow Theory*

Flow Theory is a concept developed by Csikszentmihalyi (1975) to suggest that flow has a numerous benefit that can influence a person to do something, which be induced complete engagement in an activity. Also it's described as "the holistic sensation that people feel when they act with total involvement" Csikszentmihalyi (1988). Moreover, Csikszentmihalyi (1975) noted that they become extremely interesting in their activities and also lose track of time because they are so devoted in the task: they lose self-consciousness. Therefore, the existence of flow appears when participants maintain concentration and perceived enjoyment during their using activity. Past studies on flow theory, Ghani (1995) suggested that the state of flow is indicated by enjoyment and concentration; while Huang (2003) proposed five dimensions to measure flow consisting of control, attention, focus, curiosity, and intrinsic interest. On one hand, Li & Browne (2006) believed that flow using four constructs: focused attention, control, curiosity and temporal dissociation; on the other hand, Moon & Kim (2001) addressed the flow by three components including perceived enjoyment, concentration, and curiosity. Koufaris (2002) argued that flow included perceived enjoyment, perceived control, and concentration.

In summary, the concept of flow is also complicated with multiple measurements: enjoyment, concentration, perceived control, and curiosity. Although curiosity is an important component of flow experience, it means that the state where the individual is curious about technology competency while engaged in an action (Moon & Kim 2001). While the main purposes of live-stream platform are communication and entertainment. Thus, the authors perceived that curious less relevant for our research, otherwise web surfing in which user can satisfy their curious. Likewise, in the past study of online shopping context, Koufaris (2002) measured flow using three construct: perceived enjoyment, perceived control and concentration.

In this study, perceived enjoyment is described as “the extent to which the activity of using a specific system is perceived to be enjoyable in its own right, aside from any performance consequences resulting from system use” ( Venkatesh, 2000). Next, perceived enjoyment is defined as a person’s sense in which people believe live-stream media will bring: enjoyment and relaxation. Moreover, perceived enjoyment impacts significant on a user’s technology acceptance, especially for hedonic systems (Davis et al., 1992; Koufaris, 2002; Van der Heijden, 2004). Therefore, user will have strongly motivation to use a technology which can give them fun, enjoy and pleasure. This study proposes the following hypothesis:

H1: “Perceived enjoyment” positively impacts viewer’s intention toward using live stream service.

Concentration is one of three crucial elements of flow experience. For users to be in “flow state”, first step they must be concentrate in current activity. Otherwise, they will not able to acquire the flow experience. Fortunately, live stream is a platform which the content is generated by social interaction of user participation; it is easier for them to stay focus and achieve the flow experience, which affect positively on their using intention.

This study proposes the following hypothesis:

H2: “Concentration” positively impacts viewer’s intention toward using live stream service.

Perceived control refers to belief that persons have control over their own internal state, also the necessary resources, capability in other to get positive outcome. Despite the ease-to-use technology of live-stream platform, users still need to have basic skills about Internet, smartphone, CP, etc, to use it. Moreover, Jiang & Benbasat (2004) have noticed that users would rather perception of control in audio and video than text chat. Thus, this study proposes the following hypothesis:

H3: “Perceived control” positively impacts viewer’s intention toward using live stream service.

## *2.2 Technology acceptance model*

Davis, Bagozzi, and Warshaw (1989) developed TAM in order to explain the acceptance of users toward an information technology. Moreover, TAM could be the most extended and most cited model in research on user’s acceptance of IS (Hassan and Lowry, 2015).

Previous studies on wikis (Arazy and Gellatly, 2012), social networks (Hu et al., 2011), blogs (Hsu and Lin, 2008), electronic commerce (Pavlou, 2003), e-mail, website (Gefen, Karahanna, & Straub, 2003), enterprise resources planning (ERP) systems (Amoako-Gyampah & Salam, 2004), instant messaging (Yaobin Lu, Tao Zhou, & Bin Wang, 2008) have applied TAM to explain users’ adoption. Moreover, TAM has been widely applied to users’ technology acceptance research of numerous empirical studies as a robust and parsimonious model (Lee, Kozar, & Larsen, 2003). Beside, study on the motivations of social

platform users, Wu (2009) noted that the design of ease of use and usefulness can induce users to find a positive attitude so they can continue to use the platform. Obviously, perceived usefulness, perceived ease of use are two important concepts of TAM (Davis, 1989). Perceived usefulness is described as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis 1989, p. 320). In this study, perceived usefulness is considered with user's feeling of improving performance and increasing their productivity when using the technology. Perceived ease of use is explained as "the degree to which a person believes that using a particular system would be free of effort" (Davis 1989, p. 320). In this study, perceived ease of use delineate users' perceived utilize efforts when they use the technology. Further, Davis (1989) also pointed out that perceived usefulness is related to perceived ease of use. Hence, the authors pose the following hypotheses:

H4: "Perceived usefulness" positively impacts viewer's intention toward using live stream service.

H5a: "Perceived ease of use" positively impacts viewer's intention toward using live stream service.

H5b: "Perceived ease of use" positively impacts viewer's perceived usefulness

However, Van der Heijden's (2004) argued that perceived enjoyment influenced strongly on Web users who have entertainment purposes, and the model includes three dimensions to predict the intention to use behavior: perceived enjoyment, perceived usefulness, perceived ease of use. The researchers adopted the study of Van der Heijden's (2014) to examine the relationship between perceived enjoyment and perceived ease of use. Perceived enjoyment in this model is similar to perceived enjoyment in the flow theory. In line with Davis et al. (1986, 1989) and Van der Heijden (2004), this study proposes the following hypothesis:

H5c: "Perceived ease of use" positively impacts viewer's perceived enjoyment

### *2.3 Entertainment*

Entertainment is defined the experience that includes not only pleasure and enjoyment, but also thrill and diversion (Bosshart and Macconi, 1998). In usage and satisfaction theory, McQuail (2010) have noticed that users expect that using media for entertaining and releasing stress. Entertainment is a form of activities that hold the user's interests and concentration. Live-streams is not only a type of audio and video medium, but also a unique form of social media; thus, it is characteristically entertaining.

Furthermore, study on smartphone addiction, Kim et al. (2003) pointed out that enjoyment, fun and pleasure influence in perceived enjoyment value. Moreover, the post-hoc test revealed that entertainment effects on perceived enjoyment value and it also found to influence in loyalty intentions (Kim and Niehm, 2009). A previous study, CC Chen & YC Lin (2018) investigated that entertainment impacts on perceived enjoyment value of audiences. Therefore, this study proposes the following two hypotheses:

H6a: "Entertainment" positively impacts viewers' "perceived enjoyment" of live-streams.

H6b: "Entertainment" positively impacts viewers' "concentration" of live-streams.

### *2.4 Endorsement*

A numerous studies have been conducted that people are more influenced by affective effects rather than cognitive effects. Base on affective theories, endorsement is defined as effective

as celebrity liability. In fact, such popular streamers are considered as internet celebrities when they reach an assured level of popularity and have a same kind of effect as celebrities. Endorsement includes attractiveness, trustworthiness, and expertise (Ohanian, 1991). Moreover, related to studies on motivation for watching (Z Lu, H Xia, S Heo, D Wigdor, 2018) shows that 69% of 527 live streams users reported that they watch live streams to relax, meanwhile 55% informed that they are attracted by the streamer. Therefore, in this study, the concept of endorsement is introduced as the condition in which the viewers is influenced one-way by the attractiveness and charm of streamer, they agree with streamer's attitude and behavior, as well as, desire to know the streamer's viewpoint and care about the streamer's feeling.

The implications for celebrity endorsement (Stern, Russell, & Russell, 2007; Xiang, Zheng, Lee, & Zhao, 2016) found that, though social media, people rely on a face-to-face interaction with the streamer and often define media personas as a "real friend". Thus, this relationship will enhance personal relationships and brand loyalty (Labrecque, 2014; Xiang et al., 2016). Moreover, Zipporah (2014) suggested that celebrities are individuals of unquestionably high status and in endorsements such people welcome customer to go along with them in enjoying product. The customer's purchase intention also becomes more positive due to the fact that celebrity endorsements have a significant effect on impression of a product or brand, and affect positively on perceived enjoyment value (Shafiq et al & Chi et al, 2011). Thus, this study proposes the following hypotheses:

H7: "Endorsement" positively impacts audience' "perceived enjoyment" of live-streams.

### *2.5 Co-Experience*

Lim et al., (2012) & Workman (2014) noted that the main point of social media is that allows users to share experiences. The importance of sharing experiences is especially accurate for SLSS, which level of social interaction were found more elevated than traditional online media service (Tang et al.,2016; Wang et al., 2016). In this study, co-experience refers to examine its role for the enjoyment of SLSS. Introduced by Batterbee (2003b, p.1), co-experience is defined as " the user experience which is created in social interaction"- social interaction is the process of two or more participants share their feelings, perform toward each other and receive the responses in return. "Co-experience takes place as experiences are created together, or shared with others". (Forlizzi & Battarbee 2004). Therefore, communication has been considered as a main point in the conception of co-experience Batterbee (2003a).

To reflect precisely the impact of co-experience as the combination of user experience and social interaction, the researchers follow the constructs including participation, cognitive communion, and resonant contagion of co-experiences, which is proposed by Lim et al. (2012) and socially shared cognition theory (Brewer, 1991; Higgins, 1999; Resnick et al., 1991). Firstly, participation is defined as a user experience that one's user experience involve into the content that any participant perceive together. Secondly, cognitive communion, referring to the experience that people share information which similar or meaning with others during their communications. Lastly, the dimension of resonant contagion is the extend in which a viewer's behavior is resonating or be resonated by the others' experiences and the content of ideas in order to go along with the same viewpoint in social media (Lim et al.; 2012).

Study on IS research in a social perspective (Junglas at al.; 2013), the users tend to seek pleasant interaction with others and also desire to share experiences. Both of these aspects represent the user's existence through the product or service usage (Forlizzi and Battarbee,

2004). Moreover, Battarbee (2003) noted that beside the “driving-force behind co-experience” is having fun together for example, killing time, keeping in touch, fostering social connections. Thus, viewers seek co-experience to derive pleasure from them; and, co-experience is related to audience’ “perceived enjoyment” of a live-stream obviously. Therefore, this study proposes the following three hypotheses:

H8: “Participation” positively impacts audience’ “perceived enjoyment” of live-streams.

H9: “Cognitive communion” positively impacts audience’ “perceived enjoyment” of live-streams.

H10: “Resonant contagion” positively impacts audience’ “perceived enjoyment” of live-streams.

### 2.6 Research Model

Based on these hypotheses, the researchers propose the research model is showed in

Figure 1.

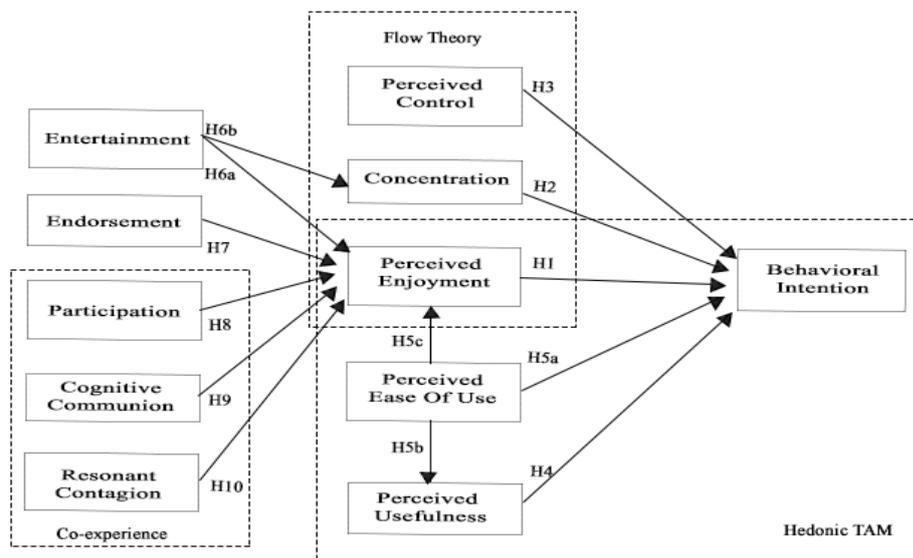


Fig1: Research Model

### 3. Methodology

To reach the research objectives, the quantitative research method was applied. The researchers used an online survey to distribute the questionnaires via social media. The survey subject is all of the Vietnamese internet users. Most of this item scales questionnaire was adapted from prior studies. After the data is collected, the reliability and validity of the scale, as well as data analysis are evaluated by using the tool of SmartPLS 3.2.

#### 3.1 Constructs and questionnaire

In this study, the researchers adapted three items Moon & Kim (2001) used to measure behavioral intention. Most measurement items of perceived usefulness, perceived ease of use was adapted from Davis (1989) in order to fit with the live stream platform. The measurement items perceived enjoyment, perceived control and concentration were adapted from Koufaris (2002). Measurements of co-experience including participant, cognitive communion and resonant contagion, was based on Lim et al (2012). The measurement items

of entertainment were adapted from Bosshart and Marconi (1998). This study also adapted items based on Ohanian (1991) to measure endorsement. All of the constructs are measured reflectively with many item scales (Mode A).

The questionnaire is set up by Google Forms, consisting of three parts. Part one asked whether the respondent ever used the live-stream services (SLSS). Next, the part included measuring questions of the research model. The last part had demographic questions about participants. All these measures followed the 5-point Likert scale, which were designed by past scholars. The participants will be asked to measure factors from one (strongly disagree) to five (strongly agree). Because of online survey with a mass data, the researchers conducted the pilot test to check the wording and suitability of the questionnaire before distributing the survey on the internet. The researchers sum up the constructs, their item scales, and the sources of the items in Appendix A.

### 3.2 Data collection and sample

Data collection was carried out with total 422 responses. After filtering to check missing data, the total of valid data is 369 (the rate of return: 87.4%). There are 369 participants conducted into data analysis, including 239 male (64.8%) and 130 female (35.4%). The demographic characteristics of those respondents are gender, age, the average time of watching live-streams per week and occupation. The survey results are listed in Table 1. About 80.76% of respondents are students and 88.6% of our samples are the age from 15 to 24. Nearly half of the respondents (48.5%) reported that they spent the average time per week to watch live-streams are between 2 to 5 hours.

Table 1: Descriptive information of the sample structures

Measure	Items	Frequency	Valid Percent	
<b>Gender</b>	Male	239	64.8%	
	Female	130	35.2%	
<b>Age</b>	<15 years old	4	1.1 %	
	15-24 years old	327	88.6 %	
	25-34 years old	31	8.4 %	
	35-49 years old	7	1.9 %	
	> 50 years old	0	0 %	
<b>Frequency (a week)</b>	< 1 hour	8	2.2 %	
	1-2 hours	37	10 %	
	2-5 hours	179	48.5 %	
	> 5 hours	145	39.3%	
<b>Occupation</b>	Student	298	80.76%	
	Officer	37	10.03%	
	Professional	15	4.07%	
	Retired/ Seeking employment	4	1.072%	
	Business Owner	8	2.168%	
	Others	7	1.9%	

## 4. Data Analysis

In order to examine our model research framework, the researchers used the partial least square (PLS). Based on Hair et al. (2016), the data was analyzed in two-step process. Firstly, reliability and validity of our measures are evaluated. Secondly, the researchers used the tool

of SmartPLS 3.2 to estimate path coefficients and their significance by running bootstrapping, in which the sub-samples are created with 5000 replacement (Ringle et al., 2016).

#### 4.1 Reliability and Validity

To meet the standard of reliability, Composite Reliabilities (CRs) should be greater than 0.7 (Bagozzi & Yi, 1998). As shown in Table 2, all of our constructs showed that satisfactory CRs were between 0.827 and 0.912. In addition, all factor loadings were over 0.5 and AVEs were above 0.5, thus the scales had good convergent validity (Hulland, 1999; Fornell & Larcker, 1981).

Also, according to Table 3, all square roots of the AVE for each dimension were larger than the correlations between dimensions, hence showing good discriminant validity.

Table 2: Analysis of Discriminant Validity

	COG	CON	ENDO	EN	INT	PA	PC	PEOU	PE	PU	RECO
COG	<b>0.83</b>										
CON	0.241	<b>0.799</b>									
ENDO	0.542	0.237	<b>0.739</b>								
EN	0.38	0.205	0.452	<b>0.857</b>							
INT	0.574	0.448	0.608	0.573	<b>0.881</b>						
PA	0.519	0.28	0.457	0.368	0.548	<b>0.893</b>					
PC	0.265	0.202	0.373	0.358	0.497	0.314	<b>0.763</b>				
PEOU	0.281	0.173	0.176	0.222	0.42	0.343	0.195	<b>0.810</b>			
PE	0.352	0.289	0.464	0.505	0.605	0.295	0.333	0.148	<b>0.860</b>		
PU	0.376	0.254	0.482	0.395	0.512	0.239	0.31	0.24	0.404	<b>0.810</b>	
RECO	0.475	0.28	0.407	0.206	0.446	0.432	0.202	0.229	0.209	0.31	<b>0.811</b>

Table 3: Results of Reliability and Validity Analysis

Factor	Item	Factor Loading	CR	AVE
PE	PE1	0.860	0.895	0.74
	PE2	0.892		
	PE3	0.828		
CON	CON1	0.791	0.841	0.638
	CON2	0.778		
	CON3	0.826		
PC	PC1	0.690	0.847	0.582
	PC2	0.819		
	PC3	0.824		
	PC4	0.709		
PEOU	PEOU1	0.798	0.884	0.657
	PEOU2	0.865		
	PEOU3	0.808		
	PEOU4	0.769		
PU	PU1	0.784	0.851	0.656
	PU2	0.881		
	PU3	0.760		
EN	EN1	0.808	0.892	0.734
	EN2	0.913		
	EN3	0.846		
ENDO	ENDO1	0.815	0.827	0.546
	ENDO2	0.774		
	ENDO3	0.691		
	ENDO4	0.667		
PA	PA1	0.931	0.887	0.797
	PA2	0.852		
COG	COG1	0.804	0.869	0.689
	COG2	0.821		
	COG3	0.864		
RECO	RECO1	0.811	0.852	0.658
	RECO2	0.880		
	RECO3	0.737		
INT	INT1	0.894	0.912	0.776
	INT2	0.884		
	INT3	0.863		

#### 4.2 Structural model analysis

The R<sup>2</sup> value shows the amount of variance in dependent variances that is explained by the independent variances. Hence, a higher R<sup>2</sup> value increases the predictive ability of the structural model (Cohen, 1988). Figure 2 presents our tested research model. Furthermore, the researchers calculated Cohen's f<sup>2</sup> to evaluate how much each construct is useful to the model. Based on Hair et al. (2014), value of .02, .15 and .35 are considered as small, median and large. Perceived enjoyment had a median effect on behavioral intention (f<sup>2</sup>=.256). Perceived control, concentration, perceived ease of use and perceived usefulness had a small effect on behavioral intention (f<sup>2</sup>=.118, f<sup>2</sup>=.101, f<sup>2</sup>=.141 and f<sup>2</sup>= .068 respectively). The researchers additionally assessed Stone-Geisser's Q<sup>2</sup>, which evaluate the accuracy of the

research model. As all of our constructs' Q2 values were larger than zero, our model also showed predictive relevance (Stone 1974 and Hair, 2014). In this study, by assessing path coefficient ( $\beta$  value) and their level of significance, the researchers found support for nine of thirteen hypotheses. The result is shown in table 4.

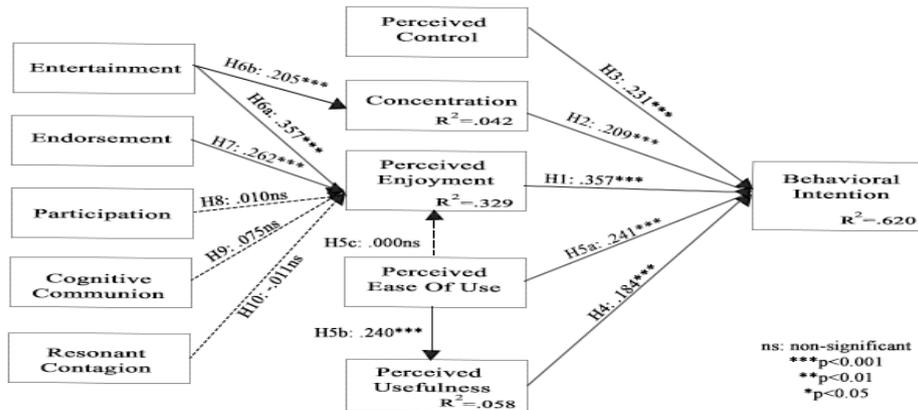


Fig. 2: Structural model analysis result

Based on Hair (2011), the  $\beta$  value should be at least 0.1 to account for effective variable. A result of the path coefficient shows that all our hypotheses are supported, excluding

Hypothesis H8 H9 H10 and hypothesis H5c.. In additional, all supported hypotheses are significant at the level of 0.000 and consist of a  $\beta$  value ranging from 0.184 to 0.357, to report for a convinced impact within the model.

Table 4: Path coefficients and the level of significance

Dependent Construct	Independent Construct	Path Coefficient	Observed T-value
<b>Behavioral Intention (INT)</b> (R <sup>2</sup> = 0.616)	← PC	0.231	5.845***
	← CON	0.209	5.290***
	← PE	0.357	9.569***
	← PEOU	0.241	5.613***
	← PU	0.184	4.723***
<b>Concentration (CON)</b> (R <sup>2</sup> = 0.057)	← EN	0.205	3.564***
<b>Perceived Enjoyment (PE)</b> (R <sup>2</sup> = 0.351)	← EN	0.357	5.283***
	← ENDO	0.262	4.306***
	← PA	0.010	0.172ns
	← COG	0.075	1.288ns
	← RECO	-0.011	0.229ns
	← PEOU	0.000	0.008ns
<b>Perceived Usefulness (PU)</b> (R <sup>2</sup> = 0.058)	← PEOU	0.240	4.411***

Note: ns: non-significant, \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

## 5. Result and discussion

The result of this study shows that perceived enjoyment as a user's essential motivations is the most significant effect on audience's intention to watching live-stream as the researchers predicted (H1). These results have corroborated previous research Flow Theory and TAM. On the one hand, entertainment indicates significant positive direct effect on perceived enjoyment and concentration (H6a, H6b), a finding which is mentioned in past studies, for example, on social website (Curras-Perez et al., 2014), general website (Hsu et al., 2012; Kim and Niehm, 2009), and addition to smartphones (Kim et al, 2013). Although its impact was not as high as entertainment, endorsement effects on perceived enjoyment as well (H7). Specifically, the higher how much the audience recognizes the streamer, the more willing to watch and interact with the streamer through live-stream. On the other hand, the participation and cognitive communion had no significant effect on the perceived enjoyment (H8, H9) and resonant contagion had no obvious effect on perceived enjoyment (H10). Although these factors of co-experience are consistent with those of past studies, they are likely to uncertain effect on behavioral intention toward live-stream service. Based on the result, the researchers reject H8, H9 and H10.

Next, the perceived ease of use had a directly significant impact on behavioral intention, making the perceived ease of use the second influential factor (H5a). For our sample, using live-stream might be a little bit difficult. The development of live-stream service, beside Facebook and Instagram as some popular platforms, numerous platforms are established with the new display, making audiences surprised and unusual. Specially, for the audiences over 25 year-old feel embarrassed and hard to use. Moreover, the result does not surprise us, as the study of David (1989) found that perceived usefulness is influenced by the perceived ease of use. Hence, hypothesis H5b is supported. In contrast, the perceived ease of use has no obvious effect on perceived enjoyment, and then the researchers reject H5c. Although the perceived usefulness is the least influential factors, it still has a significant effect on behavioral intention (H4). When users watch live-stream, they not only want to relax and enjoy the entertainment activities, but also look for the useful information.

Furthermore, with respect to three components of flow theory, perceived enjoyment, perceived control and concentration played significant roles in determining the behavioral intention toward the live-stream service. The concentration factor had a positive and significant impact on behavioral intention (H2). In additional, the researchers found that perceived control, rather than concentration, related positively to audience's behavioral intention (H3). The perceived control reveal the ability and resource owned by users. Lacking these necessary, they have a little intention to use live-stream service. Another thinkable reason for the surprising findings here was our unbalanced sample. The research had more students with 81% than the others occupation. Particularly, Vietnamese students face caring pressure to study hard to get a good score monitoring from their parents. The fact is that watching live-stream takes a lot of time, and then they have less control over their intention. Overall, perceived control, concentration, perceived enjoyment, perceived ease of use, and perceived usefulness explained 62% of the variance in audience's behavioral intention.

## 6. Conclusion

The result of this study found that all the constructs, from both flow theory and TAM, influencing watching intention of audience's behavior intention toward the live-stream service in Vietnam. By applying quantitative research method together with using reliability analysis, exploratory factor analysis, the roles of power analysis and predictive relevance, the study confirms the significance of perceived enjoyment, perceived control, concentration,

perceived ease of use and perceived usefulness in the correlation with watching intention. The sample of this study is 369 which is considered as good according to Comfrey and Lee (1992). However, due to time limit and unbalanced sample, this research is still limited and does not represent the whole Internet users in Vietnam. It is recommended that the further researchers should increase the sample to be bigger in order to get the better and more accurate result. Moreover, during the research process, the researchers figure out that in spite of no impacts of co-experience to perceived enjoyment, it could affect significantly on perceived usefulness. Then conducting future research, it is recommended to find more references that link the components of co-experience with the perceived usefulness. Although there are still some limitations, this study joins bits of knowledge and investigates numerous helpful variables that companies or organizations in Vietnam want to use live-stream as a new form to transmit content to audiences or have a plan to enter to live-stream industry of Vietnam market should take in consideration.

*Appendix A: Construct and measurement items*

<b>Construct</b>	<b>Operational definition</b>	<b>Source</b>
Behavioral Intention	BE1. I will frequently watch live-streams.	Moon and Kim (2001)
	BE2. I will continue watching live-streams in future.	
	BE3. I will recommend live-streams to others.	
Perceived Usefulness	PU1. I find live-streams useful to me	Davis (1989) and Vemkatesh et al. (2012)
	PU2. Watching live-stream increases my productivity	
	PU3. Watching live-stream helps me accomplish things more quickly.	
Perceived Ease of Use	PEOU1. Learning how to use live-stream is so easy for me.	Davis (1989) and Vemkatesh et al. (2012)
	PEOU2. I find live-stream easy to use.	
	PEOU3. It is easy for me to become skillful at using live-stream.	
	PEOU4. I find it easy to use live-stream to do what I want to do or obtain entertainment.	
Concentration	CON1. When watching a live-stream, I do not realize how fast time passes.	Koufaris (2002)
	CON2. When watching a live-stream, I often forget the work I must do.	
	CON3. Watching a live-stream gives me a temporary escape from the real world.	
Perceived Enjoyment	PE1. Watching live-stream gives me enjoyment.	Moon and Kim (2001) & Koufaris (2002)
	PE2. Watching live-stream gives me fun.	
	PE3. Watching live-stream interests me.	
Perceived Control	PC1. During watching live-stream, I don't feel confused	Koufaris (2002)
	PC2. During watching live-stream, I feel calm.	
	PC3. During watching live-stream, I feel in control.	
	PC4. During watching live-stream, I don't feel frustrated.	

Participation	PA1. I feel that I am interacting as a group of users.	Lim et al. (2012)
	PA2. I feel that I am a part of the channel community.	
Cognitive Communion	COG1. I feel that I share similar thoughts with other audiences in the chat.	Lim et al. (2012)
	COG2. I feel that my knowledge is shared with other users in the chat.	
	COG3. I feel that I shared the same perspective as other audiences.	
Resonant Contagion	RECO1. My behavior was influenced by other audiences of the group.	Lim et al. (2012)
	RECO2. My behavior influenced other audiences of the group.	
	RECO3. Our audience group agreed upon similar opinions.	
Entertainment	EN1. Watching a live-stream is entertainment.	Bosshart and Marconi (1998)
	EN2. Watching a live-stream relaxes me.	
	EN3. Watching a live-stream gives me pleasure.	
Endorsement	ENDO1. I simply appreciate the streamer.	Ohanian (1991)
	ENDO2. The streamer is attractive and charming.	
	ENDO3. The streamer is trustworthy.	
	ENDO4. I can know the streamer's feelings or views by watching live-stream.	

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# FACTORS IMPACTING STICKINESS AND WORD OF MOUTH ON MOBILE FOOD DELIVERY SERVICE APPLICATIONS IN BANGKOK

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## **Abstract**

The usage of mobile food delivery service applications in Thailand is increasing due to the higher usage of smartphone. This study aims to explore factors impacting stickiness and word of mouth of Mobile food delivery service applications in Bangkok and investigate the mean differences of people who live in different type of housing. This research was conducted a quantitative analysis through a survey method of offline and online questionnaire. There were 420 respondents who live in Bangkok and have ever used these applications. The results indicate the features; perceived ubiquity and perceived personalization have impact on perceived benefits and finally affect post-adoption behaviors. There were mean differences in the differences type of housing. The insights from this research would provide guidelines for developing effective strategies.

**Keywords:** *Perceived Ubiquity, Perceived Personalization, Perceived Informativeness, Mobile App Usefulness, Playful Engagement, Mobile app stickiness.*

## **1. Introduction**

At present, the high adoption of smartphone has changed the way consumers accomplish their daily life activities such as shopping, paying bills or chatting with friends because they can done through the variety of mobile applications (Kim, Lin & Sung, 2013). The mobile application is a type of application software designed to run on a smartphone or tablet computer. They are generally small, individual software units with limited function (Technopedia, 2018). The global mobile applications market accounted for \$108,440 million in 2016, and is expected to grow at 19.2% to reach \$311,249 million by 2023 (Ashvin Namde, 2017). The main driver of the growth is the continued development in telecom industry. The U.S. and China are the leading countries in the mobile applications industry. However, in the near future China is expected to overcome the U.S. market for mobile applications because their expanding economic and large population which together with will boost the market in Asia-Pacific.

In Thailand, the area which has the highest number of mobile applications downloads is Bangkok because it's the city which has a crowd population with a strong base of smartphone users. The online food delivery service is the interesting market. Although, the majority of Bangkokian are still placed via traditional phone calls but it has a trend to shift from phone calls to ordering online. First, there are a hundred of restaurants for consumers to choose via mobile applications especially local restaurant which didn't have their own delivery services. Second, the food and beverage purchase decisions are often instantaneous and made-on-the-go which mobile application can truly fulfill this need. Therefore, many mobile food delivery service applications from overseas enter into this market such as FoodPanda, Lineman, Grabfood, Honestbee, Now etc.

The difficulty for the mobile applications developer is that only about one third of the users continue to use an application one month after its first download, and this number shrinks to

just 4 per cent after one year (Flurry, 2011). Moreover, many studies (Davis, Bagozzi & Warshaw, 1992; Lin, Wu & Tsai, 2005) have found that both external and internal benefits motivate individuals to use mobile applications. Thus, users continue to use because they perceive the benefits of obtaining utility (extrinsic) and playfulness (intrinsic) from it. This leads to this research objective to understand the factors impacting consumer behavior on continued usage (stickiness), and word of mouth toward the mobile food delivery service applications in Bangkok together with to investigate the significant mean difference in post behavior toward mobile applications word of mouth among people who live in different type of housing. The result from this research will provide strategic guidelines for mobile application developer who would like to reach the optimal levels of stickiness and Word of mouth.

## **2. Literature review**

### *2.1 Perceived Ubiquity*

Ubiquity in the scope of electronic commerce means the activities which have done through wireless technology to allowing user to win over limited time, space and device (Junglas & Watson, 2006). Perceived Ubiquity is representing the basic features of mobile application which available for users to use at any time or anywhere (Barnes & Huff, 2003; Okazaki & Mendez, 2013). In Okazaki and Mendez (2013) view, the ubiquity consists of four benefits: continuity, immediacy, portability, and searchability. The users can use mobile application at any time they need represent continuity. The mobile application can access at any time user needed represent immediacy. The users can carry mobile app with themselves represent portability. The ability to find information at anywhere represent searchability. Moreover, Perceived ubiquity in the practical ways consists of two related things; time saving and flexibility (Okazaki, Molina, & Hirose, 2012). The concept of time saving is related to the calculation that a user calculates that time could be saved if he/she uses mobile application. The concept of flexibility is related to the mobility that a mobile phone allows a user.

### *2.2 Perceived Informativeness*

The meaning of informativeness is the ability of the information's owner to provide the users of alternative product information (Ducoffe, 1996), which allows them to make the best choices (Rotzoll, Haefner, & Sandage, 1990). Perceived informativeness corresponds to the informal type of information which is judged based on characteristics such as timeliness, relevance, and completeness of information (Ducoffe, 1995; Zhang, Zhao, Cheung, & Lee, 2014). From Kim, Lin, & Sung (2013) also mentioned about informativeness as the functional characteristics of mobile application that can provide information to the users. Moreover, informational features of mobile applications can offer practical incentives such as discount coupons or others benefits to the users in order to gain attention from them towards the brand which will lead to purchasing product or services in the future (Bellman, Potter, Treleaven-Hassard, Robinson, & Varan, 2011).

### *2.3 Perceived Personalization*

Perceived personalization is referred to the ability to offer messages or services to the users up to the information about their preferences and behaviors. (Adomavicius & Tuzhilin, 2005). At present mobile application allow the owner of the shop to communicate specific information to their customers one by one under the condition that customers already permitted to receive it (Scharl, Dickinger & Murphy, 2005). In the research of information

and communication technology (ICT) have found that personalization is one of the key strategies for service providers because it allows them to recommend services that fit their customers' preferences (Gilmore and Pine, 1997). Moreover, Customer psychology such as their information processing and decision making can be influenced by personalization (Tam & Ho, 2006).

#### *2.4 Mobile Application Usefulness*

Usefulness is the personnel belief that if they adopt the new technology, it will enhance his or her job performance (Davis, 1989). Mobile application usefulness is referred to when user can achieve their objectives by the help of mobile application (Kim et al., 2013). From the motivation theory, people are influenced to use new technologies based on extrinsic benefits (e.g. usefulness and ease of use) and intrinsic benefits (e.g. playful engagement and enjoyment) (Davis, Bagozzi & Warshaw, 1992; Deci & Ryan, 1985). Extrinsic benefits link to goal-driven activities for task performance while intrinsic benefits are associated with enjoyable activities which enhance interests and neglect goal orientation (Chou, Chiu, Ho & Lee, 2013; Deci & Ryan, 1985).

#### *2.5 Playful Engagement*

Playful engagement is an intrinsic motivation that control consumer post-adoption behaviors towards mobile applications (Chou et al., 2013). Consumer will have good feeling toward mobile applications that make them enjoyable. It's the entertainment value that has a significant impact on behavioral intention to use mobile applications (Nysveen, Pedersen & Thorbjornsen, 2005).

#### *2.6 Mobile Application Stickiness*

The concept of customer repeat purchase toward the website is called "stickiness" (Nemzow, 2000). One of the important factors of website management is stickiness because customers are hesitating to switch to the other website (Hsu and Liao, 2014). However, some researchers use visit time or frequency to measure the stickiness but for e-commerce theme, it's better to measure with repeat purchase frequency instead of time or view (Rosen, 2001; Guenther, 2004). Mobile application stickiness is the ability of the application to endure user to revisit or continue using application (Racherla, Furner, & Babb, 2012). In this study, we indicate Mobile application stickiness as the degree to which consumer are voluntary continue using mobile food delivery service applications.

#### *2.7 Mobile Application WOM*

In general word of mouth means "spoken communicated" (Merriam-Webster, 2013). In the consumption meaning, word of mouth commonly points to the knowledge that consumer give to the others about the product or service (Nyer & Gopinath, 2006). Mobile app WOM is when consumers read or heard others review or comments about the applications before downloading them (Racherala et al., 2012). It also allows them to share their opinions without time restrictions. Therefore, word of mouth is an important factor that can increase the popularity of mobile application because from the research around 52 percent of consumers download new applications to mobile phone after they talk with their friends or colleagues (Frank N. Magid Associates Inc, 2012).

### 3. Research Framework and Methodology

#### 3.1 Conceptual Framework

The conceptual framework of this study (Figure 1) is adopted from the theoretical model of Kim S., Baek, Kim Y., & Yoo (2016) to study the factor which affecting stickiness and word of mouth on Mobile food delivery service applications in Bangkok. There are three points in this model: characteristics of mobile app (perceived ubiquity, perceived personalization and perceived informativeness), perceived benefits (mobile application usefulness and playful engagement) and post-adoption behaviors (mobile application stickiness and mobile application Word of mouth) related to mobile application. The study also aims to indicate the type of housing that has and impact toward Mobile application word of mouth.

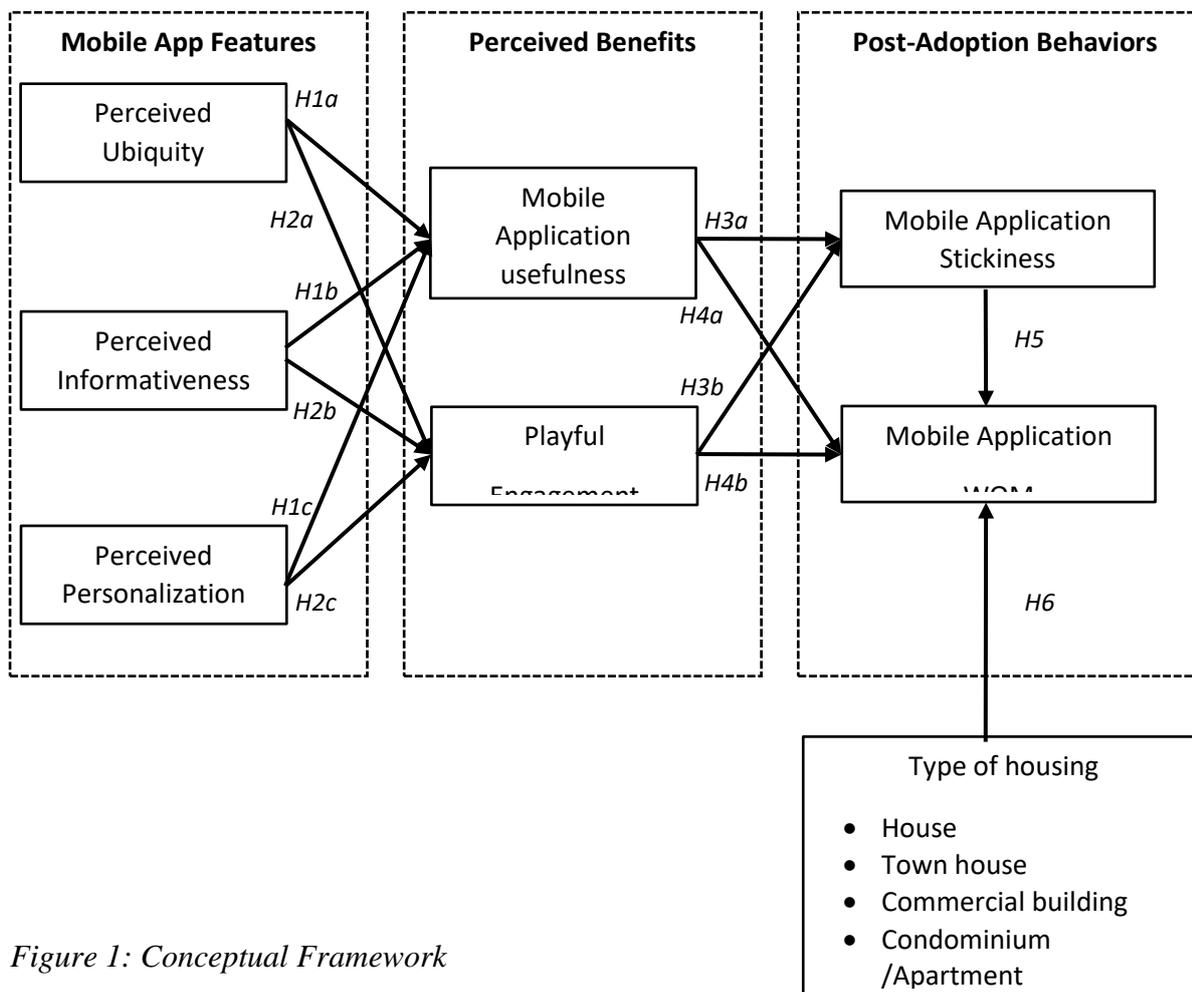


Figure 1: Conceptual Framework

This study forms twelve hypotheses, as shown in Table 1, in order to achieve the research objective. The hypotheses are defined to align with the conceptual framework as follow:

Table 1: Defined Hypotheses

No.	H	Hypotheses
1	H1	Perceived ubiquity, Perceived informativeness and Perceived personalization have significant impact on mobile app usefulness. (H1a) (H1b) (H1c)
2	H2	Perceived ubiquity, Perceived informativeness and Perceived personalization have significant impact on playful engagement. (H2a) (H2b) (H2c)
3	H3	Mobile app usefulness and Playful engagement has significant impact on

		Mobile app stickiness. (H3a) (H3b)
4	H4	Mobile app usefulness and Playful engagement has significant impact on Mobile app word of mouth. (H4a) (H4b)
5	H5	Mobile app stickiness has significant impact on Mobile app word of mouth.
6	H6	There is a significant mean difference in Type of housing toward Mobile app word of mouth.

### 3.2 Research Methodology

This research was conducted by using quantitative approach. The survey was created in form of offline and online questionnaire to collect all data. The respondents are selected by convenience sampling technique and snowball technique which is a non-probability sampling. There are 3 parts in questionnaire which are screening question, measurement of variables (Likert scale) and demographic. Five-Point Likert scale is used for measurement of items. (5 = Strongly Agree and 1 = Strongly Disagree). In the screening part, this research has intension to screen only people who have ever used Mobile food delivery service applications in Bangkok. In addition, the quota sampling was also intentionally selected to find out a difference of Mobile food delivery service applications' user from the type of housing.

### 3.3 Measurement of variables

The target respondents are Bangkokians who have experiences of using Mobile food delivery service applications in Bangkok. There are three methodologies in this research. Hypotheses 1 to Hypotheses 4 use Multiple Linear Regression. Hypothesis 5 uses Simple Linear Regression and Hypothesis 6 use One-Way ANOVA.

### 3.4 Population and Sample

This research was distributed both offline and online survey totally 453 samples but only 420 samples are considered as target respondents for this study by using convenience sampling and quota sampling to collect the data. For offline survey, the questionnaire was intentionally distributed to the people who pick up their food from Mobile food delivery service at the lobby of one of Condominium at Sukhumvit road. For online survey, the questionnaire was distributed via Line and Facebook to the people who already used Mobile food delivery service applications. The at least number of respondents at least 384 respondents are required at 95% confident level to represent 67 million people of Thai population size (Krejcie & Morgan, 1970).

### 3.5 Reliability test

Reliability test is performed using Cronbach's Alpha Coefficient with 30 sets of the pilot questionnaires that had been distributed to target respondents. All the test results of independent variable appeared to be meeting the requirement standard with Cronbach's Alpha Coefficient more than 0.6 (Cronbach, 1951). The result is shown in table 2.

Table 2: Consistency of the Scales Test (N=30)

Variables	Cronbach's Alpha	No. of items
Perceived Ubiquity	0.760	5

Perceived Informativeness	0.713	2
Perceived Personalization	0.846	5
Mobile Application Usefulness	0.778	3
Playful Engagement	0.819	6
Mobile Application Stickiness	0.909	3
Mobile Application WOM	0.708	3

## 4. Result and Discussion

### 4.1 Data Analysis

Base on the conceptual framework in Figure1, Multiple Linear Regression (MLR) was used as a statistical tool to analyze all hypotheses. All of the variables in this study can be divided into three types; Mobile App features, Perceived Benefits and Post-Adoption behaviors. The first group consists of three independent variables which in Mobile App features types i.e. Perceived Ubiquity (PU), Perceived Informativeness (PI) and Perceived Personalization (PP), and one dependent variable which is Mobile Application usefulness (MU). The second group also consists with the same as the above three independent variables i.e. Perceived Ubiquity (PU), Perceived Informativeness (PI) and Perceived Personalization (PP) and one dependent variable which is Playful Engagement (PE). The third group has two independent variables which in Perceived Benefits type i.e. Mobile Application usefulness (MU) and Playful Engagement (PE) and one dependent variable which is Mobile Application Stickiness (MS). The fourth group also consists with the same as the above two independent variables i.e. Mobile Application usefulness (MU) and Playful Engagement (PE) and one dependent variable which is Mobile Application Word of mouth (MWOM). The last group has one independent variable which in Post-Adoption Behaviors type as Mobile Application Stickiness (MS) and one dependent variable is Mobile Application Word of mouth (MWOM). In addition, One-Way ANOVA was used to analyze the score of mean differences of the Mobile Application Word of mouth (MWOM) among the Type of housing of the respondents.

### 4.2 Demographic profile summary

The demographics and characteristics of 420 respondents who are Bangkokian and have used Mobile food delivery service applications are in the Table 3 below. Majority of the respondents is female or 75.5% whereas male only 24.5% or around one to fourth of the respondents. The age of respondents can be divided into two range; 21-35 years old (82.4%) and 36-50 years old (17.6%). The major monthly income ranges are 30,001-45,000 THB (31.2%) and 15,001-30,000 THB (29.5%) followed by 45,001-60,000 THB (22.6%), more than 60,000 THB (14.1%) and below 15,000 THB (2.6%). The types of housing of the respondents are very close to each other because it's a quota sampling technique which intentionally applied to this study. The majority of the respondents are living in Condominium, Apartment or 25.7% and other are approximately 23-25% which are Town house (25.5%), House (25.0%), and Commercial Building (23.8%). Moreover, majority of

the respondents live with 2-3 people in their house at 30.5%, 4-5 people at 29.0%, more than 5 people at 20.7%, and live alone at 19.8%.

Table 3: Demographic profile (N=420)

		Frequency	Percentage (%)
Gender	Male	103	24.5%
	Female	317	75.5%
Age	21-35 years old	346	82.4%
	36-50 years old	74	17.6%
Monthly income	Below 15,000 THB	11	2.6%
	15,001-30,000 THB	124	29.5%
	30,001-45,000 THB	131	31.2%
	45,001-60,000 THB	95	22.6%
	More than 60,000 THB	59	14.1%
Type of Housing	House	105	25.0%
	Town House	107	25.5%
	Commercial Building	100	23.8%
	Condominium, Apartment	108	25.7%
Number of people in your house (including you)	1 (Live alone)	83	19.8%
	2-3 people	128	30.5%
	4-5 people	122	29.0%
	More than 5 people	87	20.7%

#### 4.3 Descriptive analysis

##### 4.3.1 Pearson's Correlation

Regarding to the Pearson's Correlation Matrix for the hypotheses in Table 1 (H1 – H5) exhibit in Table 4, most of the variables have positive correlations among each other with P-value less than 0.05 except Perceived Informativeness (PI) and Perceived Personalization (PP) with Mobile Application Stickiness (MS) which has P-value more than 0.05. According to the strength of correlations defined by the Political Science Department at Quinnipiac University (Statistic how to, n.d.), a strong positive relationship is in the range between 0.595-0.688. In this research, there are three pairs; Perceived personalization (PP) and Perceived informativeness (PI) at 0.658 correlation, Mobile Application Stickiness (MS) and Mobile application Word of mouth (MWOM) at 0.670 correlations, and Playful engagement (PE) and Perceived Personalization (PP) at 0.753 correlations.

Table 4: Pearson's Correlation Matrix

Variables	Mean	Std. Deviation	MWOM	PU	PI	PP	MU	PE	MS
MWOM	4.13	0.581	1.000						
PU	4.34	0.490	0.352*	1.000					
PI	3.95	0.749	0.247*	0.451	1.000				

				*					
PP	3.54	0.735	0.248*	0.498*	0.658*	01.000			
MU	4.18	0.624	0.323*	0.571*	0.331*	0.421*	1.000		
PE	3.63	0.691	0.319*	0.534*	0.578*	0.753*	0.455*	1.000	
MS	4.35	0.614	0.670*	0.320*	0.078	0.070	0.378*	0.140*	1.000

Note: \* represents the correlation which is significant at 0.05 level (1-tailed).

#### 4.4 Inferential Analysis and Multicollinearity Validation

Table 5: Multiple Linear Regression (MLR) and results of H1

Hypotheses	Variables	Standardized Coefficient ( $\beta$ )	VIF	Sig	Result
H1a	PU	0.482	1.379	0.000	Supported
H1b	PI	-0.009	1.831	0.864	Not supported
H1c	PP	0.187	1.938	0.000	Supported
<b>R-square</b>		0.351			
<b>Adjusted R-square</b>		0.346			

Note: Dependent Variable is Mobile Application usefulness (MU).

The result in Table 5 shows Adjusted R-square at 0.346 which can be implied that all three independent variables which are Perceived Ubiquity (PU), Perceived Informativeness (PI) and Perceived Personalization (PP) could explain the dependent variable, Mobile Application usefulness (MU) around 34.6% at the significant level of 0.05 or the 95% of confident level. The P-values of all independent variables are less than 0.05 except Perceived informativeness (PI). The hypotheses namely H1a and H1c are supported whereas H1b is not supported. Perceived Ubiquity (PU) has the most positive influence on Mobile Application usefulness (MU) of Mobile food delivery application with Standardized Coefficient at 0.482. The multicollinearity problem was also validated and found no issues with all variance inflation factors (VIF) are less than 5.

Table 6: Multiple Linear Regression (MLR) and results of H2

Hypotheses	Variables	Standardized Coefficient ( $\beta$ )	VIF	Sig	Result
H2a	PU	0.195	1.379	0.000	Supported
H2b	PI	0.104	1.831	0.013	Supported
H2c	PP	0.587	1.938	0.000	Supported
<b>R-square</b>		0.606			
<b>Adjusted R-square</b>		0.603			

Note: Dependent Variable is Playful Engagement (PE).

The result in Table 6 shows Adjusted R-square at 0.603 which can be implied that all three independent variables which are Perceived Ubiquity (PU), Perceived Informativeness (PI) and Perceived Personalization (PP) could explain the dependent variable, Playful Engagement (PE) around 60.3% at the significant level of 0.05 or the 95% of confident level. The P-values of all independent variables are less than 0.05 which mean all the hypotheses of H2 are supported. Perceived Personalization (PP) has the most positive influence on Playful Engagement (PE) of Mobile food delivery application with Standardized Coefficient at 0.587. Variance inflation factors (VIFs) found no critical issues because all VIFs are less than 5.

Table 7: Multiple Linear Regression (MLR) and results of H3

Hypotheses	Variables	Standardized Coefficient ( $\beta$ )	VIF	Sig	Result
H3a	MU	0.397	1.261	0.000	Supported
H3b	PE	-0.040	1.261	0.441	Not Supported
<b>R-square</b>		0.144			
<b>Adjusted R-square</b>		0.140			

Note: Dependent Variable is Mobile Application Stickiness (MS).

The result in Table 7 shows Adjusted R-square at 0.140 which can be implied that both independent variables which are Mobile Application usefulness (MU) and Playful Engagement (PE) could explain the dependent variable, Mobile Application Stickiness (MS) around 14% at the significant level of 0.05 or the 95% of confident level. The P-values of H3a is less than 0.05 while H3b is more than 0.05. The hypotheses H3a is supported whereas H3b is not supported. Mobile Application usefulness (MU) has positive influence on Mobile Application Stickiness (MS) of Mobile food delivery application with Standardized Coefficient at 0.397. Variance inflation factors (VIFs) found no critical issues because all VIFs are less than 5.

Table 8: Multiple Linear Regression (MLR) and results of H4

Hypotheses	Variables	Standardized Coefficient ( $\beta$ )	VIF	Sig	Result
H4a	MU	0.224	1.261	0.000	Supported
H4b	PE	0.217	1.261	0.000	Supported
<b>R-square</b>		0.142			
<b>Adjusted R-square</b>		0.138			

Note: Dependent Variable is Mobile Application Word of Mouth (MWOM).

The result in Table 8 shows Adjusted R-square at 0.138 which can be implied that both independent variables which are Mobile Application usefulness (MU) and Playful Engagement (PE) could explain the dependent variable, Mobile Application Word of Mouth (MWOM) around 13.8% at the significant level of 0.05 or the 95% of confident level. The P-values of all independent variables are less than 0.05 which mean all the hypotheses of H4 are supported. Both Hypotheses has nearly the same Standardized Coefficient at 0.22. Variance inflation factors (VIFs) found no critical issues because all VIFs are less than 5.

Table 9: Simple Linear Regression (MLR) and results of H5

Hypotheses	Variables	Standardized Coefficient ( $\beta$ )	VIF	Sig	Result
H5	MS	0.670	1.000	0.000	Supported
<b>R-square</b>		0.449			
<b>Adjusted R-square</b>		0.448			

Note: Dependent Variable is Mobile Application Word of Mouth (MWOM).

The result in Table 8 shows Adjusted R-square at 0.448 which can be implied that the independent variables which is Mobile Application Stickiness (MS) could explain the dependent variable, Mobile Application Word of mouth (MWOM) around 44.8% at the significant level of 0.05 or the 95% of confident level. Moreover, the P-values of independent variable is less than 0.05 which mean the hypotheses of H5 is supported with the high positive influence of Standardized Coefficient at 0.670. The multicollinearity problem was also validated and found no issues because variance inflation factors (VIF) is less than 5.

#### 4.5 One-way ANOVA

Table 10: One-Way ANOVA on Type of Housing → MWOM (H6)

ANOVA						
Dependent variable		Sum of Squares	df	Mean Square	F	Sig.
MWOM	Between Groups	17.655	3	5.885	19.742	0.000
	Within Groups	124.013	416	0.298		
	Total	141.668	419			

The research has objective to find if there is mean differentiation between people who live in different type of housing on Mobile Application Word of Mouth (MWOM) (H6). The result of One-Way ANOVA in the Table 9 show p-value is less than 0.05. Therefore, there is different mean among the groups and H6 is supported that there is a significant mean difference in Type of Housing on Mobile Application Word of Mouth (MWOM).

Table 11: Scheffe's Post hoc Test (Multiple Comparisons)

Scheffe's Post hoc Test (Multiple Comparisons)				
Variables	House	Town House	Commercial Building	Condominium, Apartment
House	-	-0.052	0.007	-0.482*
Town House	0.052	-	0.059	-0.429*
Commercial Building	-0.007	-0.059	-	-0.489*
Condominium, Apartment	0.482*	0.429*	0.489*	-

Note: \* represents the mean difference is significant at the 0.05 level.

Results from Multiple Comparisons test with 95% confident level in table 11 can be interpreted that there are statistical differences of mean scores on dependent variable, Mobile application Word of mouth (MWOM). From the data, it has only one group which different from the other groups. The respondents who live in Condominium, Apartment have different behavior towards Mobile Application Word of mouth on Mobile food delivery service application while other groups don't have any differences.

## **5. Conclusion and recommendation**

### *5.1 Discussion*

This research was conducted to examine the factor impacting stickiness and word of mouth on Mobile food delivery service applications in Bangkok from 420 samples that already used these kinds of application at least one time. The analysis result can be concluded that there are 3 pairs of variables which have strong relationship to each other from the Pearson correlation examination. Perceived personalization (PP) and Perceived informativeness (PI) at 0.658 correlation, Mobile Application Stickiness (MS) and Mobile application Word of mouth (MWOM) at 0.670 correlation, and Playful engagement (PE) and Perceived Personalization (PP) at 0.753 correlations

Hypotheses (H1, H2) analyzed with Multiple Linear Regression can be summarized that Perceived Ubiquity (PU), Perceived Informativeness (PI) and Perceived Personalization (PP) can represent Playful Engagement(PE) better than Mobile Application usefulness (MU) because Adjusted R-square is 60.3% while Mobile Application usefulness (MU) is only 34.6%. Perceived Personalization (PP) has the most positive influence on Playful Engagement (PE) with Standardized Coefficient at 0.587. Perceived Ubiquity (PU) has the most positive influence on Mobile Application usefulness (MU) with Standardized Coefficient at 0.482.

Hypotheses (H3, H4) analyzed with Multiple Linear Regression can be summarized that Mobile Application usefulness (MU) and Playful Engagement (PE) could explain Mobile Application Stickiness (MS) and Mobile Application Word of Mouth (MWOM) nearly the same at 14%. Mobile Application usefulness (MU) is the only variable that has positive influence on Mobile Application Stickiness (MS) with Standardized Coefficient at 0.397. Whereas, both Mobile Application usefulness (MU) and Playful Engagement (PE) has about the same high Standardized Coefficient at 0.22 on Mobile Application Word of Mouth (MWOM) of Mobile food delivery application.

Hypothesis (H5) analyzed with Simple Linear Regression can be summarized that Mobile Application Stickiness (MS) could explain the dependent variable, Mobile Application Word of Mouth (MWOM) around 44.8% at the significant level of 0.05. Moreover, Mobile Application Stickiness (MS) has positive influence on Mobile Application Word of Mouth (MWOM) at 0.670 Standardized Coefficient.

Finally, One-way ANOVA analysis applied on H6 to find if there is any different mean of four groups who live in different type of housing toward Mobile Application Word of Mouth (MWOM). The result shown that only people who live in Condominium, Apartment have different behavior toward Mobile Application Word of Mouth (MWOM) with mean significant at 0.05 levels. The others 3 groups which live in house, town house, and commercial building don't have any differences. Therefore, it can be summarized that Bangkokian who use Mobile food delivery applications which live in Condominium,

Apartment have different behavioral on Mobile Application Word of Mouth (MWOM) with people who are living in other type of housing.

### *5.2 Theoretical Contribution*

This research is the study of how the users of Mobile food delivery service application perceive that the mobile app features (i.e. ubiquity, informativeness, and personalization) have the influence on perceived benefits (i.e. usefulness and playful engagement) and finally affect post-adoption behaviors (i.e. Stickiness and Word of mouth). Whereas the previous studies have examined only a single feature of mobile service such as Okazaki and Mendez, 2013 studies only ubiquity aspect or Tan and Chou, 2008 studies only personalization aspect. Therefore, this study proposed an integrated model to explore how the three key features of mobile applications motivate the user to perceive benefits and have behavioral intentions. The result show that Bangkokian who have ever used Mobile food delivery service applications have stickiness behavior tend to recommend the others (word of mouth) to using the applications from the high positive Pearson correlation score. The multiple linear regression analysis result shows that there are two Mobile app features which have the most positive influence on Perceived benefit which are Perceived Personalization toward Playful Engagement and Perceived Ubiquity toward Mobile Application usefulness. Furthermore, the Mobile Application usefulness and Playful Engagement have relationship with Mobile Application Word of Mouth while only Mobile Application usefulness has positive influence on Mobile Application Stickiness. The simple linear regression shows that Mobile Application Stickiness has a very strong impact on Mobile Application Word of Mouth. The only group which has different behavior toward word of mouth is the people who live in Condominium, Apartment.

All the findings can be interpreted that Bangkokian perceived benefit from using Mobile food delivery service applications in the usefulness aspect from the ability to use the service at anytime and anywhere while in playfulness aspect consumer perceived it from how personalized of the application to them. The factors which made them stay on and continue using the application isn't the playfulness but the usefulness of the applications only. However, they will tell the others about the value to use the application and persuade their friends to download it from both usefulness and playfulness aspect. Those people who have different persuade behavior is the people who live in Condominium, Apartment only.

### *5.3 Implications and Recommendation*

The finding of this study suggests marketer to concern mainly two things which is the availability and customization of the application. First, it's very important to developing the time and location flexible features of mobile applications such as the stability of applications and more area of food delivery available in order to increase user perception of usefulness and continued using the mobile applications. Second, the mobile application must collect the data and convert it to the customized messages or promotion to each user because user will perceive that it is made for them and favor to perception of playful engagement. These two things will lead the users loyal to the mobile applications and recommend other people to be the customer of the company. This is the part of relationship marketing which the company is trying to achieve because it creates profitability by decreasing the number of customer turnover and also strengthening the customer relationships (Blomqvist, Dahl & Haeger, 1993). Moreover, marketer can divide communication strategies into two segments; Condominium, Apartment people and House, Town house, & Commercial building people because they have the different behavior to spread their word. Basically Condominium,

Apartment is a room in the building which has a limited space for cooking food. This posts the opportunity for the mobile food delivery service applications to enter into this group. Since, they already have their own community gathering in Line group or Facebook group so marketer can use this way to communicate directly to them. The one of effective ways to create Word of mouth by brand is creating a loyalty program as the example in service industry; Hilton. Hilton provides loyalty rewards for their customer to encourage recommendations. Hilton rewards its loyal members through its HHonors program with dining perks, free stays, and exclusive concerts (Shane, 2016). Therefore, marketer of Mobile food delivery service applications can also apply this loyalty program through the application and can customize the rewards to match with each user by analyzing the data that they use in the application.

## 6. Limitation and Future Research

This research was conducted in 2018 and focuses only on the samples in Bangkok area. Thus, the findings of this study may not be applied to other cities since geographical, cultural and environmental may vary. Moreover, the research could probably change in the future when any other new Mobile food delivery application launch and do different marketing strategy in Thailand. Further studies are recommended to revise this research in other cities of Thailand which also have Mobile food delivery application such as Phuket, Chonburi (Pattaya) or Chiang Mai for broader knowledge contribution and able to represent the whole country.

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# THE EFFECTS OF PERCEIVED VALUE, WEBSITE TRUST AND HOTEL TRUST ON ONLINE HOTEL BOOKING INTENTION OF CONSUMERS IN HO CHI MINH CITY

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## **Abstract**

The purpose of the paper is to identify the effects of perceived value, website trust and hotel trust on online hotel booking intention of consumers in Ho Chi Minh City. The research is applied quantitative methodology and survey data were collected from 403 respondents who have been using third-party online booking sites at least one time to make a hotel reservation. The key finding of this research is positive impact of perceived value, which is affected by price and quality (except safety) on individuals' online booking intention. In addition, online booking intention also has a positive relationship with trust toward hotels, which is influenced by online reviews. Trust toward third-party online booking sites is found to have no impact on hotel booking intention of consumers.

**Keywords:** *Perceived Value, Trust toward Third-Party Online Booking Sites, Trust toward Hotels, Online Booking Intention.*

## **1. Introduction**

Nowadays, e-commerce becomes an important segment for the development of economy. The increase of Internet users in Vietnam year by year is a great chance for further business in e-commerce. In 2017, the number of Internet users was 53.86 million and was expected to grow to 59.48 million in 2022 (Statista). Online hotel booking can be considered as one type of e-commerce service and is more and more widely used by modern consumers. This fact leads to a situation that most hotels have changed their business operations in accordance with the era. They have combined information technology into their operation and cooperated with third-party booking sites to increase their competitiveness. Although booking hotel online is becoming popular service to consumers, there still exists a concern about the product quality and service reliability.

Therefore, the objectives of this paper are to identify the factors that affect online consumer's hotel booking intention and evaluate the degree importance of each factor. Besides, this paper is also aimed to give some applicable recommendation for hoteliers and online booking sites to enhance the value of services to consumers.

## **2. Literature Review**

### *2.1 Price*

In consumers' perspective, price is the amount of money that they need to pay to get a product or service (Zeithaml, 1988). When consumers decide to purchase something, price becomes one of most important factors, especially, in hotel selection; price plays a vital role in their decision (Lockyer, 2005). Consumers tend to compare price of different hotels provided by online websites and then choose the suitable one. The more reasonable the price is, the more valuable consumers would feel when purchasing (Chiang and Jang, 2007). Previous research found that price can be considered as an efficient way to enhance perceived

value of consumers (Chen & Dubinsky, 2003). If price is reasonable, the perceived value will become higher. Therefore, the first hypothesis is presented as follows:

Hypothesis 1: Reasonable price positively affects perceived value.

## *2.2 Quality*

Perceived quality is regarded as the measurement of compatibility between customers' expectations and hotel services (Ye et al., 2014). According to Sweeney and Soutar (2001), quality could also be one of the factors that form perceived value. Besides, the role of quality in hotel booking intention has also been proved in some previous studies (Briggs et al., 2007; Sargeant et al., 1999; Tsang et al., 2000). Thus, the following hypothesis is proposed:

Hypothesis 2: Quality positively affects perceived value.

## *2.3 Safety*

Safety should be considered carefully by hoteliers and third-party websites as it could raise interest of customers in online hotel booking intention (Tan, 2015). In online environment, safety means that customers are protected from danger and risk. When making transactions on online websites, customers are asked to affirm their personal information, credit card number... This action may lead to information leak and some risks such as online scam, online hacked and so on (Law, 2005). Therefore, the third hypothesis is developed as follows:

Hypothesis 3: Safety positively affects perceived value.

## *2.4 Perceived Value*

The perceived value is generally defined as the trade-off between what benefits that customers get and what sacrifice to acquire the service (Zeithaml, 1988; Monroe, 1991). According to Lovelock (2001), individual can increase perceived value by adding more benefits to service or reducing costs related to purchase service. Perceived value is an important factor, which has a great impact on behavioral intentions (Cronin et al., 1997). Some previous studies also showed that there was a relationship between value and online purchase intention (Gefen et al., 2003; Kim et al., 2012; Dodds et al., 1991). This leads to a prediction that perceived value and online booking intention would have a positive relationship. Thus, the following hypothesis is made:

Hypothesis 4: Perceived value positively affects intention of booking a hotel online.

## *2.5 Trusts toward Third-Party Online Booking Sites*

Gundlach and Murphy (1993) defined that "the variable most universally accepted as a basis of any human interaction or exchange is trust" (p.35). When individual decide to purchase anything, trust is one of important factors that affects decision-making (Hennig-Thurau & Klee, 1997; Stewart, 2003).

When people make a travel plan, trust is considered as their main concern (Lewis et al., 1998). Because if they have trust in an online website, they can reduce time in searching information and making transaction (Kim et al., 2012). They also tend to purchase from that website. Besides, Chen and Dibb (2010) stated that websites have significant impact on customer intention to buy online. Therefore, the fifth hypothesis is suggested as follows:

Hypothesis 5: Trust toward third-party online booking sites positively affects intention to book hotels online.

## *2.6 Online Reviews*

Most people tend to read online reviews before making any purchase online. In online hotel booking context, online reviews are the sharing of previous customers about their experiences in different hotels, which is easy to access and more reliable than information provided by service providers (Gretzel & Yoo, 2008). A positive review will make individual change their attitude toward a hotel (Vermeulen & Seegers, 2009). In addition, online reviews have significant impact on customer intention and trust in vendors online, especially the one who often read online reviews before purchasing (Elwalda et al., 2016). Thus, the following hypothesis is established:

Hypothesis 6: Online reviews positively affect trust toward hotels.

## *2.7 Trusts toward Hotels*

When making a reservation online, customers normally feel concern and uncertain about the product or service. Thus, hoteliers should prove their reliability by demonstrating trustworthy image on booking websites, which should be suitable to website's promises (Zeithaml, 1988; Manhas, 2012). In addition, customers tend to believe that online purchase is less risk if they have more trust toward hotels (Pavlou & Gefen, 2004), which lead to a positive attitude towards booking intention (Li & Liu, 2011). Therefore, the seventh hypothesis is stated as follows:

Hypothesis 7: Trust toward hotels positively affects intention to book online.

## *2.8 Online Booking Intention*

Online booking is defined as the reservation for a service through Internet (Bhatiasevi & Yoopetch, 2015). In hospitality industry, online booking intention has the same meaning with purchase intention, which can be known as the willingness of customer to buy a product or service (Dodds, Monroe & Grewal, 1991). Besides, purchase intention can be considered as an important factor when determining the actual buying behavior of customers and this result has been empirically considered in hotel industry (Bai, Law & Wen, 2008).

# **3. Methodology**

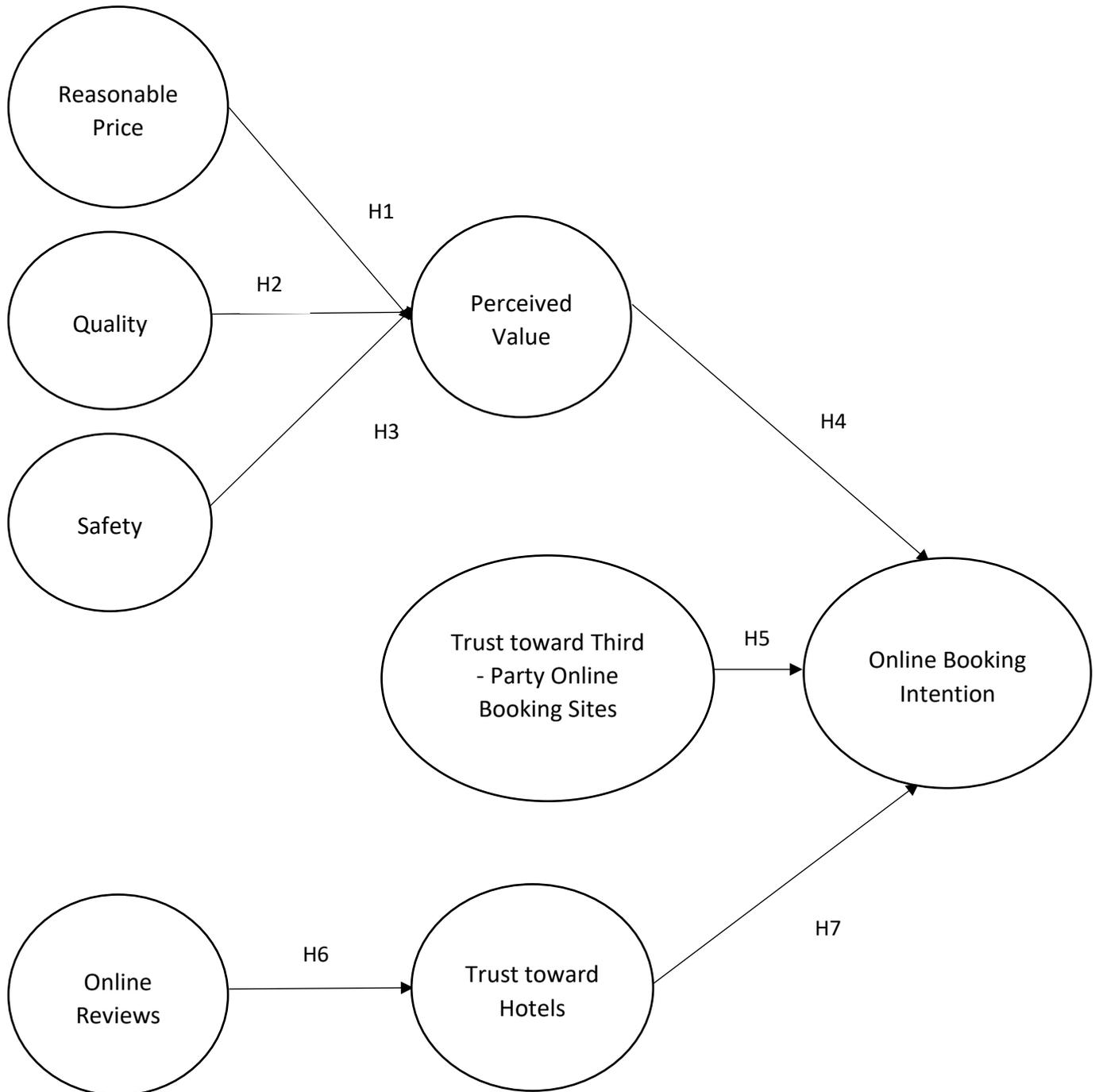
## *3.1 Sampling*

To achieve the research objectives, a survey questionnaire with 32 questions was designed and distributed in Ho Chi Minh City in October of 2018. The target population was consumers who have already used services of third-party online sites such as Booking.com, Agoda.com, Traveloka.com, Mytour.vn, and Vntrip.vn... at least one time to book a hotel. Questionnaires were delivered in online channel such as social networks (mainly Facebook), email... and offline channel. A total of 450 questionnaires were received and 403 valid responses were recorded.

## *3.2 Questionnaire Design*

The questionnaire was divided into two parts: scaled questions and demographic questions. Scaled questions were based on a 5-point Likert Scale, and respondents were asked to evaluate item from (1) "Strongly Disagree" to (5) "Strongly Agree". All eight variables in this research were adapted from measurement scales of previous studies: Reasonable Price (Chiang and Jang, 2007), Quality (Bilgihan et al., 2015), Safety (Yang et al., 2004), Perceived Value (Kim et al., 2012), Trust toward Third-Party Online Booking Sites (Wang

et al., 2015), Online Reviews (Sparks and Browning, 2011; Vermeulen and Seegers, 2008), Trust toward Hotels (Sparks and Browning, 2011), Online Booking Intention (Wang et al., 2015). The detail of measurement scales is illustrated in Appendix 1. Demographic questions were also given to respondents to ask about their gender, age, income and frequency of online hotel booking.



*Figure 1: Proposed Research Model*

### 3.3 Data Analysis Method

IBM SPSS Statistics 21 and SPSS AMOS 21 are used to analyze the data in this research. To test the validity of this study, Exploratory Factor Analysis (EFA) would be taken.

Confirmatory Factor Analysis (CFA) is also used to check the overall fit of model. In addition, Structural Equation Modeling (SEM) would be used to test the research hypotheses.

#### 4. Results

Within 403 valid responses, female and male account for 70.7% and 29.3% of all respondents, respectively. The age between 18 and 22 years old has the highest proportion of the sample (76.2%). Besides, most respondents earn under 5 million VND per month, which account for 66.5% of the entire sample. In terms of online booking experience, 41.4% of the respondents answer that they made reservations 2 to 4 times, and a significant majority of respondents prefer to use international online third-party booking sites (e.g. Agoda.com, Booking.com, Traveloka.com) rather than domestic third-party booking sites (e.g. Mytour.vn, Ivivu.com, Vntrip.vn).

##### 4.1 Reliability Test and Factor Analysis

Reliability test is used to measure the reliability of each variable by analyzing Cronbach's alpha. According to Hoang Trong and Chu Nguyen Mong Ngoc (2005), if Cronbach's alpha ranges from 0.8 to 1, the data collected will be more reliable. If Cronbach's alpha is just equal or greater 0.6, it will still acceptable based on the study of Nunnally (1978), Peterson (1994) as well as Slater (1995). In addition, all values in Corrected Item-Total Correlation should be greater than 0.3 (Pallant, 2010). Therefore, as can be seen from Table 1, all the items in this research are satisfied and reliable.

Explanatory Factor Analysis (EFA) is used to measure the validity of each variable. The KMO value of this study is 0.827 (>0.6) and significant result is 0.000 (<0.05), which are appropriate and valid. Besides, factor loadings of all items are greater than 0.3 (see Appendix 2), which mean that the results are significant.

Table 1: Results of the reliability test

Construct	Measurement Item	Cronbach's $\alpha$	Correlated Value Range
Reasonable Price	PR1, PR2, PR3, PR4	0.869	0.693 – 0.740
Quality	QUA1, QUA2, QUA3, QUA4	0.879	0.725 – 0.754
Safety	SAF1, SAF2, SAF3, SAF4	0.636	0.389 – 0.428
Perceived Value	PV1, PV2, PV3, PV4	0.935	0.829 – 0.854
Trust toward Third-Party Online Booking Sites	WT1, WT2, WT3, WT4	0.811	0.609 – 0.656
Online Reviews	ONR1, ONR2, ONR3, ONR4	0.841	0.640 – 0.710
Trust toward Hotels	HT1, HT2, HT3, HT4	0.852	0.686 – 0.699
Online Booking Intention	OBI1, OBI2, OBI3, OBI4	0.872	0.702 – 0.750

##### 4.2 Confirmatory Factor Analysis (CFA)

CFA is conducted to analyze the relations between variables and to test the fit of measurement model with data. In CFA, composite reliability (CR) and average variance

extracted (AVE) should be examined to measure convergent validity of data. To have more reasonable results, factor loading should be greater than 0.5; CR should be at 0.7 or greater and AVE should have the value greater than 0.5 (Hair et al., 2010). As shown in Table 2, all factor loadings of variable are greater than 0.5, which are acceptable. The composite reliability and average variance extracted values of most variables are satisfied, except safety (see Table 2). According to Fornell and Larcker (1981), if AVE is less than 0.5, but CR is higher than 0.6, the variable is still acceptable. It means that safety is valid, but it is just account for a small proportion of the whole questionnaire and future researchers should pay more attention to this variable.

The measurement model fit of this study is relatively good. The result shows that Chi-square = 950.527; df = 436; p = 0.000; CMIN/df = 2.180 (< 3); GFI = 0.881 (>0.8); CFI = 0.923 and TLI = 0.913 (>9); RMSEA = 0.054 (< 0.08).

Table 2: CFA results

Variables	Factor Loading	Composite Reliability	Average Variance Extracted
Reasonable Price	0.740 – 0.821	0.870	0.626
Quality	0.780 – 0.829	0.879	0.645
Safety	0.537 – 0.571	0.637	0.305
Perceived Value	0.864 – 0.893	0.935	0.782
Trust toward Third-Party Online Booking Sites	0.689 – 0.760	0.811	0.518
Online Reviews	0.702 – 0.810	0.841	0.570
Trust toward Hotels	0.764 – 0.770	0.852	0.589
Online Booking Intention	0.760 – 0.825	0.872	0.631

#### 4.3 Structural model (SEM)

Structural Equation Model (SEM) is constructed to examine correlations of latent factors as well as the structural regression model. After running two SEMs and revising the model, the overall model fit index is Chi-square = 653.225; df = 243; p = 0.000; CMIN/df = 2.688 (< 3); GFI = 0.890 (>0.8); CFI = 0.930 and TLI = 0.921 (>9); RMSEA = 0.065 (< 0.08). The results are relatively acceptable.

As can be seen from Table 3, five out of seven hypotheses have been supported, namely hypothesis 1, 2, 4, 6 and 7. In contrast, hypothesis 3 and 5 are not confirmed because their p-value are higher than 0.05 (0.684 and 0.185, respectively).

Table 3: Estimates of structural path coefficients

Hypothesis	Path	P-value	Path Estimate	Results
H1	Reasonable Price → Perceived Value	***	0.673	Supported

H2	Quality → Perceived Value	0.005	0.168	Supported
H3	Safety → Perceived Value	0.684	0.060	Not Supported
H4	Perceived Value → Online Booking Intention	***	0.417	Supported
H5	Trust toward Third-Party Online Booking Sites → Online Booking Intention	0.185	0.069	Not Supported
H6	Online Reviews → Trust toward Hotels	***	0.481	Supported
H7	Trust toward Hotels → Online Booking Intention	***	0.271	Supported

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

## 5. Discussion

This research examines the effect of perceived value, trust toward third-party online booking sites and trust toward hotels on booking intention of customers in Ho Chi Minh City. The results show that customers' intention in making reservation is just affected by hotel trust and perceived value.

Firstly, the study shows that both price and quality are positively related to perceived value of customers, which in turn, has an important effect on booking intention of them. This finding is fit with the initial hypothesis. It means that when individual wants to make a reservation online, they will consider whether price and quality of hotels on websites are appropriate and reasonable or not. The more benefits they perceive, the more likely they have intention to book a hotel through third-party websites. However, safety in this case is found to have no impact on perceived value, which is inconsistent with initial hypothesis. However, there are reasons for this situation. Vietnamese people are familiar with paying in cash for everything without concern about security, but most of the websites have asked them to pay by credit card and they keep this thought when making online transactions. They still don't have much awareness about the problems which may happen, such as personal information leakage or online scam...

Secondly, website trust has no significant effect on intention to book hotel online of consumers in Ho Chi Minh City, which is inconsistent with our hypothesis. However, when considering behavior of Vietnamese's consumers, it can be explained. Most consumers, especially young generation, usually look for price and quality when buying something. In our case, the website which provides them more benefits will be their favorable choice. They don't care much about what the website is doing or how the website handles services... Thus, their thoughts are not be affected by the trust they have toward third-party booking websites. Besides, online reviews are proved to have positive influence on trust toward hotels of customers in Ho Chi Minh City. Obviously, there is large number of hotels in third-party online booking websites, and how to choose the suitable one is difficult. The more specific online reviews for the hotel appear, the more trust of customers toward hotel will increase. Finally, hotel trust plays a significant part in booking intention of buyers. This finding is consistent with our hypothesis. Consumers are confident to make a reservation online only when knowing hotel is reliable or not. Because they will live in that hotel for a short time, they need to ensure that hotel can handle all their needs and has good responsibility.

## 6. Conclusion and Implications

### 6.1 Conclusion

The paper is conducted to find out what factors that are significantly affected online booking intention of consumers in Ho Chi Minh City. The data collected from 403 respondents shows that perceived value and hotel trust are the two main factors in this case. Based on the results, third-party booking websites and hoteliers can develop appropriate strategy to increase intention to book hotel online of consumers.

### 6.2 Practical Implications

This paper proved that customers pay more attention to price and quality when booking hotel. Thus, offering more benefits is what managers in hotel industry and third-party websites should focus. To be more specific, online booking websites can provide different choice to consumers by giving more reasonable price and various types of hotel. Hoteliers can enhance their services and employees to make consumers feel comfortable whenever they go there.

In addition, hoteliers should aware and make more efforts to enhance the online reviews on their hotels, especially detailed reviews. Because the more detailed reviews are, the more trust consumers have on the hotel, which in turn, impact on their booking intention. One possible way is asking customers to give some feedback after leaving hotel. In addition, while customers live in hotel, try to be friendly and help them to solve problems. That will make them feel pleasant and rate a high score in booking websites or recommend to their relatives, friends...

### 6.3 Limitations and Future Research

The data in this paper was only collected in Ho Chi Minh city due to time limitation and financial budget, so it doesn't represent the whole population. To be more generalized, future researchers should collect larger dataset in other big cities. In addition, future research can focus more on other factors that affect booking intention of consumers through third-party websites and how this intention will relate to hotel's revenue.

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## APPENDIX 1

### Measurement Scales

Construct	Code	Measurement
<i>Reasonable Price</i>	PR1	Price would be economical
	PR2	Price is reasonable priced for the hotel
	PR3	Price listed by this website is affordable
	PR4	Price listed by this website is competitive
<i>Quality</i>	QUA1	The hotel would be excellent
	QUA2	The hotel would be of high quality
	QUA3	The hotel would be superior
	QUA4	The hotel would be favorable
<i>Safety</i>	SAF1	I feel safe in my online transaction on this website

	SAF2	I feel secure in providing sensitive information (e.g. credit card
		number) for online transactions on this website
	SAF3	I feel the risk associated with online transactions on this website
		is low
	SAF4	This booking website will not misuse my personal information
<i>Perceived Value</i>	PV1	Considering the money paid to book hotel on the website, online
		booking here is a good deal
	PV2	Considering the risk involved in booking on the website, online
		booking here is of value
	PV3	The overall expected value of staying at the hotel is very high
	PV4	Online booking on this website delivers me good value
<i>Trust toward</i>	WT1	I believe the ability to handle booking services on this website is
		Good
<i>Third-Party Online</i>	WT2	This booking website provides transparent information
<i>Booking Sites</i>	WT3	Services provided by this booking website are not ethical
		Violations
	WT4	This booking website has a high reputation among consumers
<i>Online Reviews</i>	ONR1	I pay more attention to hotels which have larger volume of
		positive reviews
	ONR2	Detailed reviews about hotel would attract more attention
	ONR3	I will read all available reviews about a hotel
	ONR4	I will not book this hotel if any negative reviews about it are
		Spotted
<i>Trust toward Hotels</i>	HT1	This hotel would be reliable
	HT2	This hotel would be responsible
	HT3	This hotel would have high integrity
	HT4	This hotel would be able to satisfy my demand
<i>Online Booking Intention</i>	OBI1	I prefer to use this booking website when making reservations
	OBI2	I am willing to book hotel rooms using this booking website
	OBI3	I plan to book hotel rooms using this booking website
	OBI4	I may book hotel rooms using this booking website in the next
		12 months

## APPENDIX 2

### Exploratory factor analysis results

Item	Factor							
	PV	PR	QUA	OBI	ONR	HT	WT	SAF
PV2	.893							
PV4	.875							
PV3	.872							
PV1	.849							
PR2		.808						
PR1		.783						
PR4		.780						
PR3		.775						
QUA2			.856					
QUA1			.801					
QUA3			.791					
QUA4			.754					
OBI4				.851				
OBI3				.807				
OBI2				.761				
OBI1				.693				
ONR2					.777			
ONR3					.743			
ONR4					.740			
ONR1					.724			
HT4						.807		
HT1						.769		
HT3						.721		
HT2						.705		
WT1							.750	
WT2							.740	
WT3							.681	
WT4							.673	
SAF3								.599
SAF2								.559

SAF1								.551
SAF4								.491
<i>Note.</i> Extraction Method: Principal Axis Factoring.								
Rotation Method: Promax with Kaiser Normalization. <sup>a</sup>								
a. Rotation converged in 7 iterations.								

# USE OF TEXT MINING FOR TECHNOLOGY FORESIGHT

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## Abstract

The essential sources of technological documents are patent documents, research articles, technology and innovation magazines, and the funding information websites that use to gather the technological and innovation insights in order to identify potential disruptive innovations before it released into the market and to create technology and innovation strategies plan. However, researchers spend a lot of time and effort to elicit the insights from those sources. Therefore, automated text analysis or text mining approaches are used to facilitate the researchers to handle these problems. This study augment new dimension of data source for using in the technology foresight and suggest useful application in the data analysis section of technology foresight to create significance insights for the enterprise.

## 1. Introduction

In the big data era, the era of complexity and growing rapidly of innovation and information, various type of technological documents including patent documents, research articles, technology and innovation magazines, and the like are a rich source of detailed information in technical knowledge science and innovation (B. Yoon & Park, 2004). In the same time, it comes from several publication databases, technical related innovation and technology websites, and technology and innovation news. However, when researchers carefully elicit insights from the technological or innovation documents, the massive costs, time (A. J. C. Trappey, Trappey, Wu, & Lin, 2012), and effort to conduct and comprehend all of innovation documents are impossible in the brief period of time even using many researchers. Therefore, automated text analysis or text mining approaches are used to facilitate the researchers to generate technological findings and insights from innovation documents in a short time. This methodology is a one part of technology foresight helps researcher reducing work load on generating insights. The useful insights are valuable to the industries (Song, Kim, & Lee, 2017; Tseng, Lin, & Lin, 2007; Zhang et al., 2016), organizations (Song et al., 2017; C. V. Trappey, Wu, Taghaboni-Dutta, & Trappey, 2011), and even nation research and development (R&D) (Zhang et al., 2016). The insights are used to support decision making processes of top executive managers in many facets of business such as monitoring technological trends, identifying potential innovations before it swarm in the market, identifying which organizations are appropriate for merger and acquisition, deciding on make or buy decision, and so forth. Moreover, the insights also provides valuable information or “true answer” (de Miranda Santo, Coelho, dos Santos, & Fellows Filho, 2006) to policy makers of organizations on how to develop the future strategies of the organization that suitable for competing with other organizations, maintaining the competitive advantages (Kwon, Kim, & Park, 2017), and sustaining flexibility for the uncertainty of future circumstances. However, text mining approach is an important tool for understanding and generating insights in the big data era. In the previous literatures used different methodology to conduct the text mining in technology foresight. Hence, this study examines processes of text mining, especially in the data collection and application of text mining that used in technology foresight from previous literatures. Then, each application is investigated what insights is providing from it. Finally, this study proposes additional process on data collection and data analysis phase that may fulfill some aspects of text mining approach in technology foresight.

## 2. Text mining

Text mining, which covers the process of finding surprising patterns, directions, trends, models, or rules from unstructured data, is an automated knowledge discovery from texts (Berry & Kogan, 2010). The text mining approach is to process unstructured (textual) or semi-structured dataset, extract meaningful numeric indices and insights from the text, and, thus, make the information contained in the text accessible to the various data mining algorithm. Information can be extracted to derive summaries for the words contained in the documents or to compute summaries for the documents based on the words contained in them. Hence, it can analyze words, clusters of words used in documents, etc., or it could analyze documents and determine similarities between them or how they are related to other variables of interest in the data mining project. In the most general terms, text mining will "turn text into numbers" (meaningful indices), which can then be incorporated in other analyses such as predictive data mining projects, the application of unsupervised learning methods (clustering), and so on. The text mining approach is used in numerous fields such as politics and political sciences (Grimmer & Stewart, 2013), social networks studies, technology foresight, and so forth.

In the technology foresight, it is also used to perform knowledge of technology and innovation discovery from datasets (B. Yoon, Park, & Coh, 2014). Furthermore, it helps automate the related technology and innovation data analysis (Tseng et al., 2007). However, using expert judgement is still important to interpret findings from the results (Rezaeian, Montazeri, & Loonen, 2017), and also important to specify initial keywords before conducting the data collection process in order to gather the reliability and validity of the datasets. Thus, the usage of text mining approach must, necessarily, involve the experience of information professionals and of domain experts to be successful in entire of the text mining processes even though they can pay little attention on some processes. The main text mining approach processes consists of data collection, data preparation, and data analysis (including data visualization) as shown in the figure 1.

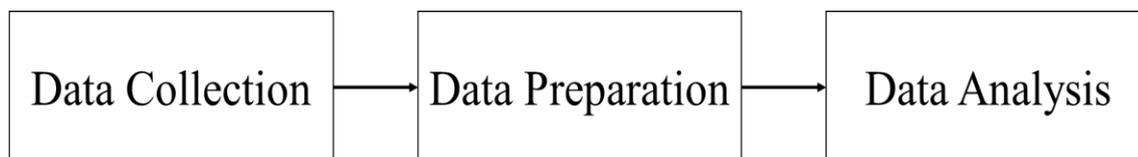


Figure 1: Text mining approach processes

## 3. Data collection process

The data collection is an important process which collects the right datasets from the right data sources in order to creating useful insights. If the right datasets are used, it can prevent the occurrence of garbage in garbage out (GIGO) data from the results and it could provide usable insights from the data analysis. The preceding literatures used some technology and innovation data sources including patent databases such as United States Patent and Trademark Office (USPTO), Japan Patent Office (JPO), World Intellectual Property Organization (WIPO), and the like (Breitzman & Thomas, 2002; Fattori, Pedrazzi, & Turra, 2003; Huang, Chen, Chen, & Roco, 2004; Lee, Lee, Seol, & Park, 2008; Niemann, Moehrle, & Frischkorn, 2017; Shih, Liu, & Hsu, 2010; Tang et al., 2012; C. V. Trappey et al., 2011; B. Yoon & Park, 2004; B. U. Yoon, Yoon, & Park, 2002), scientific research databases such as Scopus, ScienDirect, and Web of science (Kayser & Blind, 2017), future-oriented websites such as MIT Technology Review, World Future, Future Timeline, World Future Society, and so forth (Kayser & Blind, 2017; Kim, Han, Lee, & Park, 2016; Kwon et al., 2017). However,

the one important source of technology and innovation knowledge that not include in the previous studies is funding source of institute websites which are provide information related to the initial technology and innovation development. This study suggests National Science Foundation (NSF) who supports basic research in kind of funding, facility, and collaboration for all fields of fundamental science and engineering, except for medical sciences. These data source offers the frontier research data that help us to capture the initial state of the potential innovation. For example, many years before most people had heard of "nanotechnology," NSF was supporting scientists and engineers who were learning how to detect, record and manipulate activity at the scale of individual atoms -- the nanoscale. Today, scientists are adept at moving atoms around to create devices and materials with properties that are often more useful than those found in nature. Consequently, lots of companies are gearing up to produce nanoscale commercial products that has been launching into the market. So, this supporting from NSF generates value beyond scientific field to the business value worldwide. Thus, funding database should be included when conducting the technology foresight. However, the insights from these data source may take long time development before it introduce to the market, but it better to know the future technology and innovation to capture and take the benefits before it emerging.

The data sources that are used in the data collection process consisting of patent databases, scientific research databases, future-oriented websites, and funding databases. As shown in the table 1, description of each data source is provided. Firstly, the patent databases are the most used source in the various preceding studies. It provides significant technological information about how and what main component of each technology. Secondly, the scientific research databases, i.e. Scopus and ScieneDirect provides detailed information in the particular keyword that is interested or used in order to query related research articles from this source. Moreover, the research articles also offers the name of university and the name of the authors that is used to identify insights for creating the correct collaboration for future researches and developments that appropriate for the firm. Thirdly, future-oriented websites demonstrate member's opinion, particular expert opinion (Kim et al., 2016). These data source assistances on inquiring perspective on how the technologies and innovations in the future are from the experts. Finally, the funding databases indicate the information similar to patent databases and scientific research databases, but it provides the initial state of researches and developments in particular technology. Additionally, it offers the financial value of the technology in term of grants that help to identify the significant or more interesting technology. Thus, the different data source is used to extract different insights, and it is also combined with each other to enhance and create diverse perspectives of the technology functions, components, and trends.

Table 1: Description of data sources for data collection process.

<b>Data source</b>	<b>Description</b>
Patent databases	In this data base, it provides a very rich and fruitful source of data for the study technical change and innovation. The information in the patent include title, abstract, name of innovators, name of company, and so forth. Moreover, the most important of the patent is technological information including raw materials that used in the stuff, main principal of the stuff, manufacturing and controlling process (B. Yoon et al., 2014).
Scientific research databases	The scientific research databases, e.g. Scopus, ScienceDirect, and Web of science are important source of

	basis scientific knowledges that are ample quality and updated source in each technology.
Future-oriented websites	It offers technological trends and predictions from the members in the websites. Furthermore, it also provides member's interactions and opinions on each penitential technological issue in the online websites (Kim et al., 2016). Moreover, some members are domain expert professional in each technology issue. Thus, this data source reduces work load on the process of gathering domain expert opinions.
Funding databases	It provides an initial research and development of potential technology and innovation. The information from this source is used to capture the early state of research and development to gather benefit before it announcing into the markets. The first group of firms can take more advantage than the consequence group of firms, especially, in case of success research and development.

#### 4. Data preparation process

Text is complex, but not all word is necessary to efficiently analyze texts. Raw data from data collection process are well managed in this process to increase efficiency and effectiveness of further data analysis (Kwon et al., 2017).

Generally, the first step of text mining approach is tokenization which separate sentence into a simple list of words. A simple list of words, which is called unigrams, is usually adequate to convey the general meaning of a dataset (Grimmer & Stewart, 2013).

In addition to tokenizing word process, punctuation, capitalization, common words, and uncommon words are removed from the dataset. This technique is called stopword process. It is used to reduce the complexity and the quantity of the text that lead to decrease noise in the dataset. After tokenization process and stopword removal process, the next step is stemming process that used to remove or reduce dimensionality of text (Grimmer & Stewart, 2013). For example, education, educate, educating, educated, and educational all become *educat*. Stemming reduces the complexity of text into a basic concept as a single root. The Porter stemming algorithm (Porter, 1980) is commonly employed in the stemming process.

Next, the tagging process augments parts of speech of each word. For instance, *educat* is augmented with "e" (educate) to give a simple context in which to present them. Then, the result of aforementioned process is turned into a document-term matrix(Grimmer & Stewart, 2013) to count the frequency and weight the occurrence of each word between documents in order to find relationship and meaningful of the dataset. The approach that mostly used in this process is term frequency by inverse document frequency (TF-IDF) (Grimmer & Stewart, 2013; Tang et al., 2012; Tseng et al., 2007). The classic formula of TF-IDF analysis as shown in the figure 2(Salton & Buckley, 1988).

$$TF \times IDF = \frac{\text{Frequency of term } t_i}{\text{Total instances of terms in record } D_j} \times \log \frac{\text{Total records number in the set}}{\text{Total number of records with term } t_i}$$

Figure 2: TF-IDF formula (Salton & Buckley, 1988).

The result from this process is that the word sorted by frequency count and some words that are low frequency count deleted. Thus, the dataset is ready to use in the data analysis process.

## **5. Data analysis**

This process consists of many means to gather the insights from the processed dataset including basic analysis from the structured data, term association, term clustering, technology mapping, and scenario development.

### *5.1 Basic analysis*

Basic analysis refers to the traditional patent analysis that has been commonly applied in technology foresight. Such analysis determines performance in technology development based on attribution in the raw dataset. However, in this study examine data from various data sources. Thus, attribution may differ from each other. For example, the patent documents have, at least, five attributions including number of patents, cites per patent, name of inventors, name of company, and science linkage. Nonetheless, the future-oriented websites provide only opinions and articles of the specific technology. So, the right way to elicit insight from all data sources is that compares insights and trend between them. The basic analysis has been performed for type of analytical units: countries, institutions and technological fields.

#### *5.1.1 Country analysis*

The total numbers of patent, scientific research article, and funding information by year are used to identify the top countries that have high quantity of the technological issue (Huang et al., 2004). The top countries pay attention in term of expenditure and knowledge on the particular technology. It also offers the trends of each country on this technology. Upward trend shows that the countries interest to research and develop in this particular technology and they may beat the competitors with higher research intention. Instead, downward trend indicates that the technology is at the state of plateau or it not interesting to devote intention in order to further research. As aforementioned above, this study employ various data sources. So, it should compares the trends and results between patent databases, scientific research articles, funding information, and future-oriented data year by year to identify which the source act as the key driver in the particular technology. Furthermore, not only the numbers of publications are used in the country analysis, but also include citation count. Citation count can help to detect which country are the technology leader, it mean that which country have significant knowledge on the technology.

#### *5.1.2 Institution analysis*

This analysis familiar to the country analysis, but differ in the way of identifying related institutions, universities, or enterprises in the field of the technology. This analysis is employed to specify which institute appropriate to make a collaboration or to make decision on merger and acquisition (M&A) activities, including valuation, targeting, and compatibility (Breitzman & Thomas, 2002). Moreover, this analysis can specify the competence what they are specialize on the technology of each institute. In addition, it indicates the current state of research and development of which institute concern or discard the technology and it also identify which institute have interesting research topics that may change or produce the radical technology by using the funding information in the attribute of “award funding”.

### 5.1.3 Technological fields

Technological fields' data, for instance, chemistry: molecular biology and microbiology, chemistry: natural resins or derivatives; peptides or proteins; lignins or reaction products thereof, optics: systems (including communication) and elements, optics: measuring and testing, and so on are support enterprise to specify related branch of knowledge that conclude in the technology. It also supports enterprise to decide on whether Make or Buy decision. The enterprise decides on Make it, when they already have necessary resources or unique skills for develop the technology. Instead, if they lack required capabilities to develop the technology, they may choose buy decision.

### 5.2 Association rule mining

This analysis method is widely recognized method for determining relationships between the high occurrence words in the datasets (Kim et al., 2016). Association rule mining provides information of correlations and patterns among single words (unigram) in the form of “if-then” rules, e.g., {unmanned} → {aerial}. The one of the insights from this analysis method is occurrence relationship between words; some previous studies call this method as word co-occurrence networks (Garechana, 2017 #35). If they frequently occur together, for example, in the last two years, it means that this relation is interesting and it tends to be a potential research and development issues. Not only determining relationships between words occurrence, but also including co-author network that helps enterprises to confirm which group of researchers or innovators have a massive impact on the technology.

### 5.3 Scenario development

Scenario development is a broadly accepted method for technology foresight to envision the future technology. It captures complex relationships between the technology and several environments such as industry, market, legislation, society, and provides the formulation of long term strategies (Robinson, 2009). This method addresses an evolution of the technology. The main advantage of this method is that more information from various sources can be analyzed as compared to traditional literature analysis and these methods also reduce the reading efforts and time consumption at the beginning of the scenario process (Kayser, 2017).

## 6. Conclusion

In summary, the results of all data sources should compare together to validate, cross check, and enhance the insights that will support the decision of the enterprise. Moreover, the funding data source may indicate the initial state of technological research and development that generate the first opportunities for the enterprise gathering the first benefits from technology adoption and implementation.

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# CONSUMERISM CULTURE IN URBAN VIETNAM

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## **Abstract**

This paper discusses the specific features of consumer culture derived from economic transition, emergence of consuming class in cities and recent political history of post-socialist era in Vietnam. To make sense of this, the paper draws on a body of scholarship specific to the Vietnamese context where materialism values, social status and conformity are used as a part of on-going identity work by consumers in Vietnam. Focusing on the identity construction created through brand consumption, the empirical study particularly explores how the younger generation of urban consumers in Hanoi and Ho Chi Minh City define themselves to build a new image of emerging consumer force. The paper concludes by defining the potential and existent tension (a new global-local way) of consumption practices in contemporary Vietnam.

**Keywords:** *Consumerism, Culture, Materialism, Urban*

## **1. Introduction**

Consumption is involved in the creation and maintenance of social relationships (Veblen 1925; Reisman 1950; Bourdieu 1979). Consumers try to transform the link between self and society through consumption. The inspirational groups play an active role in constructing their social identity through consumption. They set “the tone for culture as a whole” (Featherstone 1991, p.110).

Today's global consumer is faced with a wide range of styles and choices. It is not difficult to find a global brand in cities of developing countries where “consumption and urban life have been a central component of the development of [an emerging] consumer society” (Jayne 2006, p.3). The emerging cities are increasingly characterized by the growing consuming group. According to McKinsey (2012), we would expect over one billion more people joining the consuming class in emerging market cities by 2025, which is truly transforming the world economy.

The emergence of the new consuming class and the new desires appearing would create the expansion of the market and redefinition of the world according to the market logic (Sheth 2011). Accordingly, the stream of potential fantasy materials with the active factors and actors leading to new research on consumption in emerging markets appear quickly. Featherstone (1991) suggests we must shift our attention to emerging transnational cultures where “the style of the richest countries was widely influential, and the sense of sharing in global patterns was attractive” (Stearn 2001, p.135). However, the result is not global hegemony as local consumers adapted consumerist values to more familiar standards (Stearn 2001; Jackson 2004; Trentman 2004). “Consumer culture in the developing world followed suit: ‘the West’ soon came to be reframed in terms of the ‘good life’ to be had through consumerism” (Ustuner and Holt 2010, p.40).

Vietnamese people in cities actively embrace the modernity and globalization themes (Vann 2006; Freire 2009) when the government initiated the Economic Renovation (1986). “There is an urge by everyone to catch up with the world” (Shultz et al 1994, p.47). In the expanding economy of Hanoi and Ho Chi Minh City, consumers are confronted with a world of

commodity goods (Maruyama and Le Viet Trung 2007), and rapidly becoming integral to the culture of pleasure seeking (Nguyen-Marshall et al 2012).

## **2. Research Methodology**

Taking Hanoi and Ho Chi Minh City as the case studies, the main aim of the study is to explore the influence of brands upon how the younger generation of urban consumers (re)construct and negotiate their social identity at the intersection of globalization and local discourse. With qualitative orientation, we use psychological and interpretive approaches to provide the latest data on consumer culture in Vietnam by analytically identifying meaning making practices (Elliot and Timulak 2005) of consumer behavior at the conjunction of globalization and locality. The surveys with projective techniques were carried out among 600 Vietnamese respondents (610 distributed) in Hanoi and Ho Chi Minh City, to understand precisely the face work of younger urban consumers through brand consumption. One of the main tasks in the survey asked the respondents to spend 15 to 20 minutes writing a story about consuming Western brands. The survey data was supported by in-depth interviews of 16 urban middle-class and follow-up participant observation to explore the varied ways in which these consumers use and attach symbolic meanings to the products they consume to affirm their social identity. The key findings in this paper were analyzed, based on the 600 written stories, 16 qualitative interviews and 4 participant observations

## **3. Results & Discussions**

Materials determine interpretation of the face strategies regarding one's face implications (Cocroft and Ting-Toomey 1994; Wong and Ahuvia 1998, Trinh 2012). The collectivistic cultures with the influence of Confucian values indicate that one must look good and be judged by possessions (Wong and Ahuvia 1998), which provides inspiration for status consumption among the new consumers of Vietnam, borrowing the model of the Western lifestyle and, consequently, Western brands. These consumers are serious and concerned with their credibility, which makes them "label" consciousness. "Face" is understood as a desire to gain favorable social self-worth and to be valued in relation to others (Belk 1996, Trinh 2014). Thus, the younger generation of Vietnamese urban consumers would buy brand names to publicly display their wealth and position within particular social circles. They are extremely class conscious to shift the social boundaries.

In this study, the younger urban consumers in Hanoi and Ho Chi Minh City show a clear preference for products from developed countries (Western countries) as confirmation of higher level of material achievement and to maintain positive impression upon the others (Belk 1999; Wong and Ahuvia 1998). For Vietnamese urban consumers, Western brands are associated with status and pride in the construction of social identity, to convey that one is "high class, modern and civilized" (Wilk 2006, p.22).

The findings also demonstrate the way of consuming an item is like an act of wearing a 'mask' by the consumer, which can be 'loudly' or 'quietly', displayed to fit in a favorably social circle. The outcome of consumerism and traditional heritages – the negotiation of show-off face and quiet luxury face has become the nature in the habitus of Vietnamese urban consumers. They are more guided in behavior and practices by societal standards or group norms. In a collectivist culture such as Vietnam, when interacting with others in society, most are concerned about what others think of them (Nguyen Thi Tuyet Mai 2003), thus consumers would place more importance on the symbolic values (Wong and Ahuvia 1998; Batey 2008). The emerging consumers in urban Vietnam pay more attention to the

front region, referring to the “screening – off of aspects of identity”, where the performance is given (Goffman 1969).

### *3.1 Conspicuous consumption*

When the surface of self or the front region expects to be seen by the others (Goffman 1969, Trinh 2012), individuals consume visible products or brands at the time telling others of their social status or desired images. It’s the expression the individual wants: ‘I want to show my stuff’. It’s the reaction the individual wants to receive: ‘I want a noisy chat about my stuff’. They allow to be seen, they display, to become visible. To some extent, it is apt to attract attention and convey the message about the existence of the product. The economic socialization orients people towards a favorable view of social inequality and materialism values. The more each individual believes in the values of materialism, the more part of show-off one would occupy.

### *3.2 Status consumption*

Status consumption or quite face is more related to the quiet display of the product that the performer wants to do. Consumers use the side of the performance that does not call for attention from others. It’s the part that the individual wants to hide. It’s the expression the individual who want to communicate “let’s my consumption invisibly apt to the situation or the setting” or “don’t pay attention to me and my stuff”. In the manner, products are presented without expecting the responsive reaction from the others as being the central of attention. The purpose is to be intangible in some ways, to please themselves, and to achieve normal looks, to be different from show-off face or others.

One participant in Ho Chi Minh City spent huge money on purchasing Burberry, just make to satisfy her own interest, which was nurtured during her childhood with English Literature. Burberry with classic style reminds her of her love for British royal family. She does not expect the colleague in her office admiring her whenever she carries a Burberry bag. Even she knew the mimic ones of her Burberry bag are widely seen in the streets of Ho Chi Minh City and maybe her colleagues would never know her stuff is genuine.

The data analysis contains four underlying factors (Taste, the influential, Parents, and Socialism and Confucianism) influencing consumers in the way of their presenting self and shifting between show-off face and quiet luxury face in a particular social context. Consumers would negotiate (swift) among these factors to convey aspects of their social identity.

### *3.3 Taste*

Taste is used as a mean of distinction between classes or group (Bourdieu 1984) and taste is commonly defined and recognized among a group in a favorable condition. In the context of Vietnam, consumers see class position as an equivalent to taste, or use taste as a distinction to swift the line of class “Not anyone know how to buy stuff with money, even they are rich. Some are just “Trưởng giả học làm sang - ‘neau vouriche learn to become aristocrat’ “(25, male, HCM City, Survey). The choices of brand defined through the word ‘taste’ become a surer mark of class distinction.

### *3.4 Key Opinion Leaders (KOLs)*

The KOLs are “keepers of the flame for the ideas” in consumption (Keller and Berry 2003, p.82). They can be the group leaders, the celebrity or anyone who can have power to influence on the others’ consumption pattern and choices. They have stronger and sufficient breadth and depth of expertise on others’ decision (Keller and Berry 2003, p.129).

### *3.5 Parents*

Strong family ties are unique to the context of Vietnam as well as other Asian countries as part of Confucian-based culture. To some extent, parents’ perception of face work through consumption practices would influence on the younger generation’s choice to shift between different images of faces. For some young people, family bonds are still stronger than other kind of social bonds when they obediently conform to the social acceptance as their parents want.

### *3.6 Socialism and Confucianism*

Vietnamese cultural diversity influenced by Confucianism which is characterized by Collectivism and power distance dimension (Hofstede 2001, 2001). Inside each, there is a contradictory negotiation between show-off face and quiet luxury face when they interpret themselves through material presentation. People would negotiate between “to have” and “want to be” to achieve the certain purposes and involve certain social interactions. Consumers learn themselves to negotiate and re-negotiate between modernity, globalization themes and cultural values of traditions and obedience to political dictates, to pick a suitable mask in relevant setting.

When material can serve as “sign of political values” (Dittmar 1992, p.79), the quiet luxury face would be favorably occupied among Vietnamese society. Power distance (Hofstede 1991, 2001) refers to the value of hierarchy in a society which attributes importance to formal difference and respect for people of higher status. When people work for the state, they would care more about their socialist image and public image. One participant with a senior position at Vietnam Press Agency did not forget to put on normal jean and T-shirt with a friendly image of Vietnamese youth volunteer when joining the charities activities in the remote area.

## **4. Conclusions**

Urban consumers in Vietnam today learn to adapt themselves to the new consumer culture and bend themselves to their will, shifting from the culture of discipline to the culture of pleasure seeking. They are more inspired by the tastes, sensibilities, and practices of the Western lifestyles, but produced in the local culturally context. The emergence of transnational consumer culture in Vietnam both features the pleasure of immediate material encountering (Reisman 1950; Hayton 2010) in discontinuity with past of the war consequences and culturally maintain continuity with collectivist tradition (Wong and Ahuvia 1998; Nguyen Thi Tuyet Mai 2003) as the possible roots of consumer conformity.

The transition to driven-market economy in Vietnam has created many changes in social values (Nguyen Thi Tuyet Mai 2003, p.18), leading consumers quickly embrace the modernity themes. The ‘new’ rich want to distinguish their social position from working class

and establish their position in urban society (Nguyen Bich Thuan and Mandy 2004) and makes the way people present themselves more visibly with materials. Materials can help them to “differentiate them from a certain socio-economic category and marks their social status” (Freire 2009, p.70).

Vietnam is a case study of transnational consumer culture, which a class become conscious of its interest. The emerging consumers are symbolically linked with each other by the notion of Western lifestyles and the associations of brands in post-socialist Vietnam. “Nobody wants to be called “thợ” (working labour). The way you behave and understand the world tell which position of social map is dedicated for you” (22, male, Hanoi, Survey).

The country is strained by its attempt to balance a Confucian-based and socialist model with a capitalist market economy (Harm 2010; Libby 2011). Consumption practices in Vietnamese context is continuously challenged by the “rival forces of markets and culture” (Trentmann 2004, p.379), which is not necessarily “a complete surrender to ‘Western values’” (Trentmann 2004, p.380). It may be measured in a rise in material standards, and cease to add happiness (the culture of pleasure seeking) in established consumer societies.

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# FACTORS THAT IMPACT ON REVISIT INTENTION OF PATIENTS IN PRIVATE HEALTHCARE SERVICE IN HO CHI MINH CITY

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## **Abstract**

This study aims to examine the impact of convenience, service quality, cost perception, word-of-mouth and hospital image, patient satisfaction and patient trust on revisit intention of patients. The sample of this study is 424 respondents in private hospitals in Ho Chi Minh city, Vietnam. The questionnaires are distributed to collect the data. Structural equation modeling (SEM) is conducted to analyze the data. As the results, this study shows that convenience, word-of-mouth and cost perception have no impact on revisit intention, patient trust and satisfaction in order, and that service quality affects patient satisfaction. Besides, cost perception, hospital image and patient satisfaction have positive influence on patient trust. Furthermore, service quality, hospital image, patient satisfaction and patient trust have positive impact on revisit intention of patients.

**Keywords:** *Convenience, Service Quality, Cost Perception, Word-of-Mouth, Patient Satisfaction, Patient Trust, Revisit Intention*

## **1. Introduction**

Healthcare service has become one of the most important services to the community, which provides patients many critical purposes such as inspection, forecast, treatment and health control. Obviously, healthy condition is needed to complete daily activities well. Healthcare service is described as knowledge-based service that diagnoses body, identify priority of patients and give solution by using intellectual capital (Mills and Moshavi, 1999). Moreover, professional healthcare service is mentioned as a specialist, possessing diagnostic skills, treatment options, other technical skills and knowledge (Wilson, 1994).

Vietnam's healthcare system still faces with tremendous challenges such as low-quality service and overcrowded in National level of hospitals. In other word, reputable national level hospitals illustrate the extremely high occupancy rates. Some records of K hospital, Cho Ray Hospital, the Vietnam National Cancer Hospital and Bach Mai Hospital reached 250%, 139%, 172%, 168% occupancy rate. Due to WHO, the bed occupancy rate should not be over 80%, but Vietnam experienced a high occupancy rate in big cities such as Ha Noi, Ho Chi Minh City, Da Nang. In addition, there are more than 40,000 Vietnamese patients go abroad for medical treatment and they spend nearly US\$ 5 billion in developed foreign countries such as Thailand, Singapore, The United States (Vietnamnews, 2015). Moreover, the average length of stay is the ratio shows the quality of Vietnam healthcare system. The length patients stay in hospitals in Vietnam are quite long when compared to Thailand and Singapore which means that it takes more time for treatment in Vietnam. The purpose of this study is to investigate how patient's revisit intention in private healthcare industry in Vietnam affected by the factors listed in literature review below. We developed conceptual model, theoretical model using quantitative method to study factors that impact on revisit intention of patients in Ho Chi Minh City, identify the factors of hospital image, patient satisfaction, word-of-mouth, patient trust, convenient, cost perception and service quality toward the revisit intention in

using medical service and evaluate degree importance of each factor and give practical recommendations and solutions for private hospital to improve the quality service of their hospitals to meet the demand of patients and also reduce the overcrowded flow of public hospitals in giant urban cities. The sample of this study was 424 patients from four private hospitals such as Hoan My Hospital, FV Hospital, Vinmec Hospital, An Sinh Hospital and Columbia Asia International Hospital.

## **2. Theoretical Background and Proposed Hypothesis**

### *2.1 Service quality*

Service quality is defined to satisfy the customer's need based on the overall of natures and characteristics of the goods and services (Kotler and Keller, 2012).

### *2.2 Cost perception*

The definition of costs in healthcare service is replied on approach of price. Although there is a similarity between price and cost, there is difference in practical concept. Price usually relates to product, while cost refers to service. Price is defined as the money paid for a product and service, or consumers use it as a tool to trade off for benefits of their own or making use of a product or service (Kotler and Armstrong, 2012). Lovelock and Wirt (2012) also have a different definition of price in the service context; prices are explained to be a utilization of money, time and endeavours that customers spend on buying and using service.

The lower price of service is explained to result in greater value. Prasetyo (2012) and Sugianto (2013) point out that customer satisfaction significantly partially affects the price. Moreover, the firm's profit level as well as level of customer satisfaction increase by the price perception, and raising the reasonable price is also highly related to the success of the firm and the customer retention (Ranaweera & Neely, 2003).

### *2.3 Patient satisfaction*

Linder-Pelz (1982) defined customer satisfaction as an assessment of different medical dimensions. Customer satisfaction information is considered as the desired outcome of healthcare service and be compulsory for quality evaluation of healthcare design and management (Turner and Pol, 1995).

Several studies tested the relationship between service quality and customer satisfaction. They also discovered that the high service quality associated with the high customer satisfaction in service industry (Spreng et al., 1996; Cronin et al., 2000; Oyeniya and Joachim, 2008). Through SERVQUAL model, the scale of service quality in decision of patient plays a very important role in satisfying the service quality (Bowers et al., 1994). Other study explains that tangible, responsiveness; reliability, assurance, and empathy are determinants in measuring the service quality (Zeithaml et al., 2005). In healthcare sector, Lee et al. (2010) found that there is a positive link between quality of medical service and satisfaction of patients. Moreover, there is a significantly positive effect on satisfaction of patient in both private and public hospitals. Therefore, perceived service quality of a patient will stimulate the satisfaction of patient.

Based on the aforementioned reasoning, we proposed two hypotheses as below:

H1: The services quality of hospital has a positive impact on patient's satisfaction.

H2: The cost perception significantly impacts on patient satisfaction.

#### *2.4 Word-of-mouth*

Word of Mouth (WOM) is seemed to be verbal conversations between actual customers or prospects and other people, such as goods or service providers, independent specialists, relatives and friends (Helm and Scheli, 1998). Roselius (1971) refers that consumers who received more risk realized WOM as a very helpful strategy in diminishing the risk, WOM was highly appreciated by the customers.

#### *2.5 Hospital image*

The image of the company also plays an important role in service sector because of influences of corporate image on service quality and also resulting in customer satisfaction (Clemes et al., 2009; Wu et al., 2011). Sutisna (2002) showed that positive image brings five benefits to the company performance such as easier communication and well-known about word-of-mouth communication, filter that has awareness of corporation's activities, the connection of image to the experience and expectations, greater effect on controlling or inside impact.

#### *2.6 Patient trust*

Trust is defined as behavioral, replied on one's beliefs about the characteristic of someone or something. Medical relationship is usually come into by patients with a predetermined level of trust and this level is easily altered by the interaction between patients and general practitioners and also healthcare system (Thorne & Robinson, 1988).

The determination of cost seems to be important for firms. All the costs are not only covered, but also the benefits are provided for both parties by the specific price. According to Ellen and Lee (2003), they figured out that the flexible cost has an influence on confidence of product or service. Otherwise, there is no connection between prices and trust (Yieh et al., 2007).

Chiun-Sin Lin et al., (2010) concluded that positive WOM has a significant effect on perceived trust, and the increasing in trust perception is a mediating relationship between WOM and the behavioral intentions in utilizing service.

The consumers usually intend to buy a product or services based on the brand image, and also trust a popular brand. Consumer's (patient) trust can be improved by the good brand image because of diminishing purchasing risk (Chen, 2010; Chiang & Jang, 2007). Hence, a brand is a key factor of the company, while popular brand usually refers to its reputation.

The long-term benefits of a firm can be created by consistent quality of service. The revisit of consumer is defined as a direct assessment on some situations including customer satisfaction (Singh and Sirdeshrnukh, 2000). Trust of customers can be built by their satisfaction in utilizing goods and services (Lupiyoadi, 2012). Thus, we have four hypotheses as follow:

H3: The cost perception significantly impacts on patient trust.

H4: The positive WOM has a positive influence on patient trust.

H5: The hospital image has a positive impact on patient trust.

H6: Patient satisfaction significantly affects the patient trust.

### *2.7 Convenience*

Convenience is turning to an essential benefit for consumers having time-constraint and it also raises the interest of customers (Farquhar and Rowley, 2009). Value which is convenient in terms of search, access, purchase and utilization becomes a target of time-poor consumers (Seiders et al., 2000).

### *2.8 Revisit intention*

Behavioral intention is said to be as an individual predicted or intended future behavior (Oliver & Swan, 1989). By combining findings and anecdotal proof, there are 13 elements to measure a wide range of behavioral intention through practical testing (Zeithaml et al., 1996). Those elements are placed in 5 groups: loyalty, shift, pay more, internal and external response. Revisit intention and willingness to suggest which operates loyalty, is always analyzed by investigators of behavior of consumer (Baker & Crompton, 2000). Some researchers said there also were spending with company, feedback; complain behavior and aforementioned factors which are vital elements of behavioral intention (Cronin et al. 2000; Zeithaml et al. 1996). Repurchase intention is used to analyses in service industries, which seems as a main dependent variable (Cronin and Taylor 1992; Taylor 1997; Taylor and Baker 1994).

Revisit intention has been researched in many fields such as traveling services (Alegre and Cladera, 2009), catering services (Kim and Moon, 2009), healthcare services (Lee, 2005), retail management (Zboja and Voorhees, 2006), banking services (Shao et al., 2008), telecommunication business (Wang et al., 2004), etc. This research focuses on analyzing revisit intention through factors affecting behavioral intentions.

Chang & Polonsky (2012) concluded that five types of service convenience affect satisfaction of the customer and also enhance the revisit intention in hospitality sector. The more positive aspects of service convenience were, the more important it was for both level of satisfaction and behavioral intention. In healthcare context, this study will measure relationship between convenience and revisit intention based on two elements such as location, time consuming.

There is significant connection between service quality and behavioural intention based on modeling by several studies (Bitner, 1990; Boulding et al., 1993, Zeithaml et al., 1996). In the healthcare industry, revisit intention is measured to have effect on technical features and how impressive staff and service behave first time in front of patients (Eleuch, 2011). The revisit intention which is most frequently applied begins with the well-established opinion when satisfaction of patients with the hospital is really high.

Trust is said to be a vital structure in the trust model when unreliability exists (Mayer et al., 1995). The level of confidence is perceived by most people who intend to use or buy something. Therefore, awareness of reliability can be intensified by receiving suggestions, and then revisit intention is supported.

The result of Aghekyan-Simonian et al.'s (2010)'s research pointed out that there is positive effect of brand image on repurchase intentions by declining the risk perception. Creating positively the image of corporation with greater satisfaction of the customer raises the behavioral intention (Anderson et al., 1994).

So we have five hypotheses as follow:

H7: Convenience significantly has positive impact on behavioral intention.

H8: Service quality has significant impact on behavioral intention.

H9: Patient satisfaction has significant effect on behavioral intension.

H10: Patient trust significantly has positive impact on behavioral intention.

H11: Hospital image has a positive influence on behavioral intention.

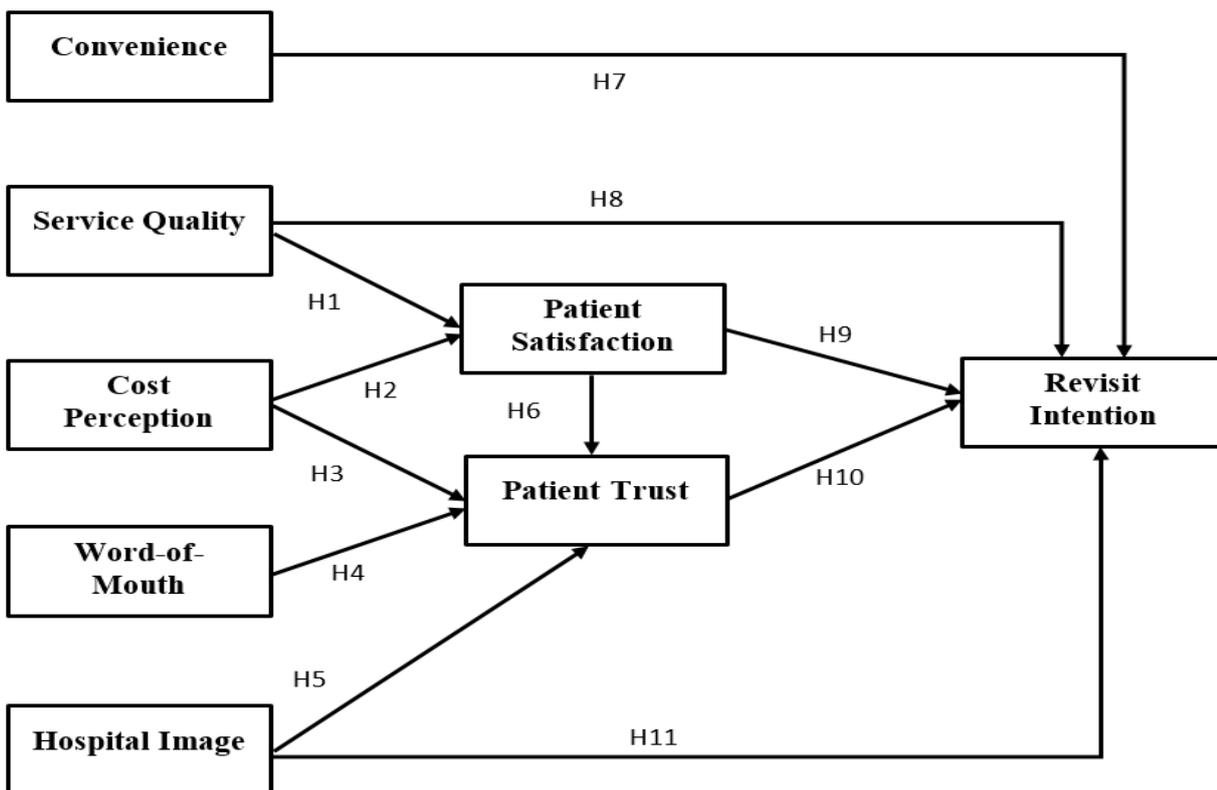


Figure 1: Conceptual model

### 3. Methodology

#### 3.1 Sampling

Non – probability sampling is the suitable option for this study because of shortage of time, human resources and budget. Convenient and snowball sampling are also used in this study due to the benefits of both of them such as the availability of individuals who are willing to participate (Cooper and Schindler, 2006). Target population was Vietnamese people who used to use at least one among private healthcare centers and lived in Ho Chi Minh City. The data should be collected through online form which accounts for 225 respondents and paper at site locations which accounts for 225 respondents. Site locations include Hoan My Hospital, FV Hospital, Vinmec Hospital, and An Sinh Hospital, Colombia Asia International Hospital.

There were 424 questionnaires distributed. Besides, 424 questionnaires were valid for deeper analysis because some respondents had conflicts and refused to do the survey and some surveys were not completely done. The response rate was good enough to conclude that there was not any non-response bias affecting data.

### *3.2 Questionnaire design*

The questionnaire included 2 parts for measurement. The first part is the general questions about testing respondents through 3 questions, which are “Have you ever come to hospital for treatment?”, “How many time have you come to hospital for treatment?”, “Which hospital do you like to come most?” and personal information questions. The second part consists of questions related to each variable in the conceptual model such as Service Quality, Cost Perception, Convenience, Word-of-mouth, Hospital Image, Satisfaction, Trust and Behavioral Intention. In addition, we considered the fourth primary dimensions taken from studies of Brady and Cronin (2001), Chahal (2009) and Sardana (2003), which are physical environment, interaction, process and outcome quality for service quality measurement. Based on the characteristics of this research, Likert scale (Rensis Likert, 1932) is used for this study. Some arguments of Green and Rao (1970) accepted six or seven-point scale. On the other hand, discovering new scale related to different situations is essential (Ghiselli, 1995). In conclusion, the suitable scale in this study is five-point scale which begins from 1 (Totally Disagree) to 5 (Totally Agree). Due to regulations and standards of translation of Brislin (1980), the questionnaire is made with English and Vietnamese version and ensure the similarity both of them.

### *3.3 Data analysis method*

The results from respondents through questionnaire are utilized for data analysis. SPSS and AMOS software are used to analyze data. The analytical process includes five steps such as descriptive statistics, reliability and validity testing, correlation and testing the fit pattern of the model with AMOS. Descriptive statistics method is utilized to analyze the demographic data of respondents. Moreover, the reliability and validity tests will test with Cronbach’s alpha, CR coefficient and Explanatory Factor Analysis (EFA) testing which is required to test before AMOS analysis. In addition, testing the compatibility between data and hypothetical measurement model by Confirmatory Factor Analysis (CFA) and testing effects among variables in the model by Structural Equation Model (SEM).

## **4. Data Analysis**

Most of respondents were from 18 to 40 years old whose income was from below 10 million VND to 20 million VND. Moreover, they also went to three among five hospitals such as Hoan My Hospital, Viet Phap Hospital and Vinmec Hospital, and most of them they came to these hospitals once to twice.

### *4.1 Measurement model*

#### *4.1.1 Reliability test and EFA*

This part consisted of two tests. The first test is using coefficient alpha to test the inner consistency of each scale which called reliability test (Drost, 2011). The second test is EFA which was used to examine the validity of measurement (Nunnally,1978). After running SPSS and testing, the Cronbach’s alpha of each factor higher than 0.7 and the factor-loading

greater than 0.49 would be hold for deeper analysis (Table 1). The others which were not followed the conditions above would be eliminated from the model.

*Table 1: Results of the reliability test and EFA*

<b>Variables</b>	<b>Measurement Item</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Corrected Item-Total Correlation Range</b>	<b>Factor-loading Range</b>
Service quality	SQPE	0.867	0.671 – 0.707	0.638 – 0.821
	SQI	0.881	0.665 – 0.732	0.668 – 0.859
	SQP	0.800	0.468 – 0.632	0.530 – 0.735
	SQO	0.736	0.464 – 0.533	0.533 – 0.672
Cost perception	CP	0.891	0.644 – 0.786	0.660 – 0.853
Convenience	CON	0.922	0.770 – 0.827	0.748 – 0.894
Word-of-mouth	WOM	-0.121	-0.110 – 0.005	-
Hospital image	HI	0.869	0.679 – 0.729	0.643 – 0.820
Patient satisfaction	SAT	0.915	0.693 – 0.791	0.721 – 0.836
Patient trust	TRT	0.860	0.628 – 0.701	0.652 – 0.777
Revisit intention	RI	0.854	0.582 – 0.674	0.505 – 0.778

All of items had high Corrected Item – Total Correlation, except from all items of Word-of-mouth had the low correlations which were below 0.3 and its Cronbach's Alpha was still below 0.3. Furthermore, Cronbach's Alpha of all factors was high as much as the condition. In other words, we eliminated variable Word-of-mouth from the model. Others factors would load well in EFA. The value of KMO of this research is 0.935 (>0.6) and its significant is 0.000 (<0.05). Hence, we reject H4: The positive WOM has a positive influence on patient trust.

#### 4.1.2 CFA

CFA has provided a validation test for theory proposing in this research. Moreover, CFA test was conducted to test how the data fits with the conceptual model. Additionally, we had to test the reliability of the result in CFA process, which were called composite reliability test. It was used to be measurement for analysis. The results must be equal to 0.7 or greater to make sure the study fitting with the criteria of Cronbach's Alpha. The table below would illustrate how this model was reliable. In addition, e7 & e10 had the high modifications indices value (25.780) which was above 15. We had to draw covariance between aforementioned pair.

Table 2: CFA, Composite reliability, Average variance extracted results

Variables	Factor-loading	Composite reliability	Average variance extracted
SQPE	0.735 – 0.777	0.868	0.566
SQI	0.721 – 0.829	0.882	0.600
SQP	0.527 – 0.717	0.801	0.449
SQO	0.556 – 0.641	0.795	0.359
CP	0.682 – 0.851	0.892	0.625
CON	0.792 – 0.884	0.923	0.705
HI	0.738 – 0.784	0.870	0.572
SAT	0.724 – 0.835	0.915	0.644
TRT	0.678 – 0.787	0.860	0.552
RI	0.646 – 0.731	0.855	0.495

Moreover, composite reliability test is still not enough for CFA testing, average variance extracted (AVE) was used for convergent validity. If there were any problems with AVE, which means that the observed variables do not qualify to give explanation of latent variable. In the Table 3 above, the results of composite reliability and AVE were acceptable which above 0.7 and 0.5. However, there were three variables having the AVE's value below 0.5. Due to Fornell and Larcker (1981), it is said that if the average variance extracted is below 0.5 and above 0.4, although composite reliability is still higher than 0.6, the construct of convergent validity is still adequate. So in Table 3, composite reliability results were nearly 0.8. In other words, we can accept convergent validity. Therefore, the divergent test was used to evaluate. After processing, the AVEs were greater than  $R^2$  and also greater than MSV and ASV, which leads to the acceptance of discriminant validity. In conclusion, the model was fit with the measurement scale of CFA after running two times. To be specific, we had  $Cmin/df = 1.249 (<2)$ ;  $TLI = 0.969 (>0.9)$ ;  $GFI = 0.887 (>0.8)$ ;  $CFI = 0.972 (>0.95)$ ;  $MSEA = 0.028 (<0.08)$ .

#### 4.2 Structural equation model (SEM)

CFA test is not enough to examine further the relationship between implicit constructs, which is not about testing the simple correlations (Hair et al, 2010). Specifically, we conducted Structural Equation Model (SEM) to test the measurement and the structural regression of model. From the results of SEM, all hypotheses were supported with the value of p less than 0.05, except from the relationship between Patient Satisfaction and Service Quality in Outcomes, Cost Perception and Patient Satisfaction, Convenience and Revisit Intention, Revisit Intention and Service Quality in Outcomes. Besides, the model fit was quite good enough with the acceptable threshold level. Moreover, there were some weak correlations among relationship which p-value was above 0.05 and those relationships in the table below

must be eliminated. The fit index was Cmin/df = 1.412 (<2); TLI = 0.962 (>0.9); GFI = 0.889 (>0.8); CFI = 0.965 (>0.95); MSEA = 0.031 (<0.08).

Table 3: SEM final results

Hypotheses	Path	Sub-scale	SEM results	Test results
<b>H1</b>	Service Quality → Patient Satisfaction	SQPE → SAT	0.294***	<b>Supported</b>
		SQI → SAT	0.262***	<b>Supported</b>
		SQP → SAT	0.341***	<b>Supported</b>
		SQO → SAT	0.092(0.066)	Not Supported
<b>H2</b>	Cost Perception → Patient Satisfaction	CP → SAT	0.064(0.186)	Not Supported
<b>H3</b>	Cost Perception → Patient Trust	CP → TRT	0.288***	<b>Supported</b>
<b>H5</b>	Hospital Image → Patient Trust	HI → TRT	0.350***	<b>Supported</b>
<b>H6</b>	Patient Satisfaction → Patient Trust	SAT → TRT	0.298***	<b>Supported</b>
<b>H7</b>	Convenience → Revisit Intention	CON → RI	0.044(0.420)	Not Supported
<b>H8</b>	Service Quality → Revisit Intention	SQPE → RI	0.299***	<b>Supported</b>
		SQI → RI	0.191***	<b>Supported</b>
		SQP → RI	0.162(0.003)	<b>Supported</b>
		SQO → RI	-0.058(0.158)	Not Supported
<b>H9</b>	Patient Satisfaction → Revisit Intention	SAT → RI	0.187***	<b>Supported</b>
<b>H10</b>	Patient Trust → Revisit Intention	TRT → RI	0.161(0.002)	<b>Supported</b>
<b>H11</b>	Hospital Image → Revisit Intention	HI → RI	0.203***	<b>Supported</b>

\*\*\*: *p*-value <0.001

Table 5: Covariance results

Covariances	P-value
SQPE $\leftrightarrow$ SQP	0.568
SQPE $\leftrightarrow$ SQO	0.160
SQI $\leftrightarrow$ SQO	0.978
SQP $\leftrightarrow$ SQO	0.058
CP $\leftrightarrow$ SQO	0.395
HI $\leftrightarrow$ SQO	0.972
CON $\leftrightarrow$ SQO	0.134

## 5. Conclusion and Discussion

This study investigated the impact of convenience, service quality, cost perception, word-of-mouth, hospital image, patient satisfaction and patient trust on revisit intention of patients towards private healthcare services in Ho Chi Minh City. All the independent variables were discovered to positively effect on patient satisfaction and patient trust, except from cost perception and word-of-mouth. And there were some variables such as service quality, hospital image having directly positive effect on revisit intention. Moreover, patient satisfaction also had positive impact on patient trust. Furthermore, patient satisfaction and patient trust significantly impact on revisit intention. Hence, this study made a strong contribution to have deeper understanding about consumer behaviour in this sector.

Firstly, this research found that service quality had also positive effect on patient satisfaction and also on revisit intention, which means that service quality will increase the satisfaction and revisit intention of patient. This finding is associated with the initial hypothesis. Kitapci et al. (2014) demonstrated that the relationship between service quality and patient satisfaction was positive. Moreover, service quality in this research also positively influenced on revisit intention, which is consistent with the proposed hypothesis. In the study of Choi et al. (2004), it is said that the increasing in service quality led to the increasing in revisit intention of patients.

Secondly, patients' perception on cost could enhance their trust, and have no effect on patient satisfaction. Price has played a significant role in consumer decision. Due to the purchasing power, patients could perceive the best benefits of the products or services. Accordingly, this finding is consistent with the statement of Ellen and Lee (2003) who giving the evidence of price on patient trust and inconsistent with Rahmatang et al. (2018) suggesting that there was an influence of price on satisfaction.

In addition, convenience did not contribute to revisit intention. In private healthcare service, consumer intended to go for treatment at private hospitals where were far from their home. This finding is inconsistent with the hypothesis. Besides, word-of-mouth was not highly appreciated in this research because we are living in industrial revolution 4.0, and the traditional type as word-of-mouth becomes out-of-date. Private healthcare hospitals could use

the digital marketing to advertise their services to the consumers, which are seemed to be more effective than the traditional one nowadays.

On the other hand, all patients who completed the survey intended to go for treatment at private hospital with the positive image. They came to the hospital through the relationship between hospital image and patient trust. Additionally, hospital image also directly affected revisit intention of patients. This finding is consistent with the previous study of Rhamatang et al. (2018) and Chao-Chan Wu (2011) indicating that hospital image had direct and indirect effect on revisit intention.

Furthermore, the service quality giving the best benefits in long-term leads to high satisfaction of patients. Therefore, those patients who satisfied with the services which they perceived will trust the hospital. Besides, it could also lead to the high revisit intention of patients.

Finally, patient trust also affected the revisit intention of patient. This finding is consistent with hypothesis. Patawayati et al. (2013) suggested that the high level of trust could lead to the high revisit intention of patients.

### *5.1 Practical Implications*

This study examined a model combining convenience, service quality, cost perception, word-of-mouth, hospital image, patient satisfaction, patient trust and revisit intention. Eight of eleven hypotheses were supported. From these results, the managers from private hospitals or potential investors in private healthcare sector can have better understanding about the relationship among variables. Therefore, it was also the mechanism for enhancing revisit intention of patients. In addition, it also helps to reduce the overloaded in national level hospitals. Furthermore, the results also helped to reinforce the previous studies regarding the marketing strategies and related issues of hospitals.

Firstly, the excellent service quality can improve the patient satisfaction and revisit intention, which means that service quality influenced indirectly on revisit intention through patient satisfaction and patient trust. It is essential for hospital managers that there should have patient-oriented service strategies for healthcare service. The more important these strategies were, the higher level of healthcare service provided. Multidimensional aspects such as physical environment, interaction, process must be carried out.

Secondly, hospital image not only had a direct influence on revisit intention, but also had an indirect influence on revisit intention through patient trust. In competitiveness of private healthcare sector, hospitals should pay attention to enhance the brand management activity by using marketing. It is fully to understand that positive hospital image is crucial to increase the patient trust and also encourage patient to revisit. Moreover, there were numerous integrated marketing strategies such as interaction with patients, advertising, public relations, social marketing, and online marketing, training courses that needed to be applied to build and maintain the hospital image in healthcare industry.

Finally, the cost perception can increase the level of revisit intention through patient trust. The private hospitals must focus on the price of the services, which means that they should maintain the reasonable price compared with others hospitals. Furthermore, the hospital managers and future investors should create the campaigns on the price to promote the current patients come back for treatment and attract to future patients in order to reduce the

overcrowded in public hospitals. To sum up, appropriate cost perception can rise the patient trust for private hospitals.

In conclusion, maintain the excellent service quality, appropriate cost perception, hospital image, which affected revisit intention of patients through patient satisfaction and patient trust, can help hospitals to give a competitive advantage in private healthcare industry.

### *5.2 Contributions, Limitations and Future Research*

This study helped to build a new research framework that explains the revisit intention of patients in private healthcare service sector. This is an integrated model convenience, service quality, cost perception, word-of-mouth, hospital image, patient satisfaction, and patient trust in a successful attempt to enhance the revisit intention. The study gave out the overview of the customer trend in private healthcare service so that the current private hospitals and potential investors can propose appropriate marketing strategies to change the degree of above factors in order to raise the revisit intention of patients. Our research model can be easily applied not only in the investigated industry (private healthcare), but also in other markets.

Although there are many contributions, this study has some limitations.

At first, because of time limit and financial capacity, the sample size of the data could not represent for the whole population. Further research should pay attention to this limit by using representative sampling which leads to generalized results, which means that we need to collect the data from others big cities such as Ha Noi, Hai Phong, Da Nang, Can Tho city.

Further research may add more factors into the model such as perceived value, integrative review, relationship marketing, and customer relationship management as hidden determinants of revisit intention. Moreover, the future research should pay attention to the variable SQO having the low average variance extracted as in this study.

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**Appendix: Measurement Scales**

<b>Construct</b>	<b>Sub – Scale</b>	<b>Item</b>	<b>Reference</b>
Service Quality	Physical Environment	SQPE1: Hospital location was safe.	Brady and Cronin (2001), Chahal (2009) and Sardana (2003)
		SQPE2: Examination rooms were hygienically kept clean all the time.	
		SQPE3: Medical store provided all required medicines from doctors.	
		SQPE4: Hospital was well furnished with modern facilities.	
		SQPE5: Supportive public facilities (ATM, customer service counter,...) were easy to access.	
	Interaction	SQI1: Doctors behaved politely and honestly.	
		SQI2: Doctors always listened and informed sufficiently about your treatment.	
		SQI3: Technical staffs carefully paid attention to testing process and injective process.	
		SQI4: Doctors were able to give a logical explanation to me.	
		SQI5: This hospital had knowledgeable and skillful staffs.	
	Process	SQP1: The procedure of medical examination and treatment was simple and fast.	
		SQP2: It did not take a long time to meet the doctor.	
		SQP3: Hospital provides an appropriate grievances-handling channel.	
		SQP4: Hospital immediately returns the accurate test results.	

		SQP5: Process quality of this hospital was good in general.	
	Outcome	SQO1: I feel good about what this hospital served their patients.	
		SQO2: I always had an excellent experience when taking examination in this hospital	
		SQO3: Modern techniques in healthcare were well maintained.	
		SQO4: Doctors totally met my expectations.	
		SQO5: Nurses totally met my expectations.	
Cost Perception		CP1: The cost I paid was not high compared to others hospitals.	Chiang and Jang (2007) and Dodds et al. (1991)
		CP2: The cost I paid was reasonable.	
		CP3: I totally knew what I had to pay.	
		CP4: The cost I paid were worthy than what I expected.	
		CP5: I really care about the cost of services.	
Convenience		CON1: Going to this hospital did not take long time.	Berry et al. (2002)
		CON2: I easily recognized the location of this hospital.	
		CON3: I did not have to wait on the line for treatment because of booking an appointment in advance at home.	
		CON4: This hospital allows me to make an appointment for the next visit.	
		CON5: This hospital allowed diversified methods of payment which were convenient for me.	
Word – of – Mouth		WOM1: My friends always told more about this hospital in great detail than others hospitals.	Harrison-Walker (2001), Bambauer
		WOM2: My relatives frequently suggested	

		me should go to this hospital.	and Mangold (2011) and Jalilvand and Samiei (2012a)
		WOM3: I was advised to go to this hospital by outside experts.	
		WOM4: To choose the good hospital, I usually read online medical reviews on reliable website.	
		WOM5: Before going to this hospital, I consulted other online medical reviews.	
Hospital Image		HI1: This hospital has always impressed me a lot.	Nguyen, N., & Leblanc, G. (2001)
		HI2: In my view point, this hospital had a good image in consumer's thought.	
		HI3: Overall facilities of this hospital are modern.	
		HI4: This hospital has a good reputation.	
Satisfaction		SAT1: I satisfied with the way of doctors, nurses, staffs serving patients in this hospital.	Bitner et al. (1994), Patawayati et al. (2013)
		SAT2: I satisfied with service price in this hospital.	
		SAT3: Experience in this hospital satisfied me a lot.	
		SAT4: I satisfied with the infrastructure and equipment of this hospital.	
		SAT5: I satisfied with the ability of diagnosis and treatment of the doctors in this hospital.	
		SAT6: I satisfied with the my decision to choose this hospital.	
Trust		TRT1: I completely trusted the diagnosis of the doctors.	Hall el at. (2002)
		TRT2: I was not worry about the decisions of doctos.	
		TRT3: I totally trusted the health recommendations from my relatives and my friends when choosing hospital.	
		TRT4: The doctors always think the treatment	

		options which are best for me.	
		TRT5: I had confidence in the treatment of this hospital.	
Revisit Intention		RI1: I will say positive things about this hospital to other people.	Zeithaml et al. (1996)
		RI2: I will encourage relatives and friends to use this hospital.	
		RI3: This hospital will be my first choice of healthcare service treatment.	
		RI4: I will continue to use services of this hospital even if prices increase in the future.	
		RI5: I will pay higher for the benefits of treatment from this hospital.	
		RI6: I will return to this hospital for the next treatment.	

# EXPLORING THE FACTORS IMPACT CREDIT CARD SPENDING BEHAVIOR AMONG PEOPLE IN BANGKOK, THAILAND

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## **Abstract**

Nowadays, credit card has very important role as a method of payment that people are using in exchange for product or service all over the world. In Thailand, many people rely their spending behavior based on their income level; more income level leads to more spending. The questionnaire is distributed via internet. Multiple Linear Regression and One-Way ANOVA are applied for the hypotheses testing. Finally, benefits given, qualifications of applying credit card, willingness to pay, awareness about total debt owed, and management of income and expenses are the factors that impact to the spending behavior of credit card holders. The recommendation for credit card issuer is apply attractive offers for the first-time application and use flexible pay plan to stimulate card holders to spend more.

**Keywords:** *Credit Card, Spending Behavior, Bank's Policies, Attitude toward Money, Benefit's Given, Payment Policies.*

## **1. Introduction**

Credit card is one of the payment methods which is similar with debit card, but the funds are not removed from the card holder's account immediately. When the card was swiped, the card holder has cycle period to pay off all amount that occurred (Issa, 2018). There are many advantages of credit card using such as signup bonuses, rewards, cash back, flyer miles, safety, insurance, etc. (Fontinelle, 2018). In Thailand, the popular benefits that mostly available are reward point, installment plan, cash back, and discount. Furthermore, credit card is very popular and many of Thai people are holding more than one card per person, it was estimated that all credit cards in Thailand are spent approximately THB 750,000 million during January until May 2017 (Insite Station Network Co., Ltd., 2017). Bundit Center Co., Ltd. (2013) also mentioned that people in Bangkok are holding more than two cards and half of them do not pay the statement in full amount. According to Interspace (Thai) Co., Ltd. (2015), it is stated that the higher income earning leads to higher spending because most of the people perceived that they have more spending power, credit card is the medium that support them to bring the money in the future to use. It is very interesting to study the factors impact the spending behavior of credit card holder. Regarding to (Teoh, Chong, & Yong, 2013), age, income, occupation, marital status, benefit's given (BPB), qualification of applying credit card (BPQ), payment policies (BPP), willingness to pay(ATMW), awareness about the total debt owed (ATMA), and management of income and expenses (ATMM) are identified and analyzed the impact on spending behavior of credit card holders (SB).

According to the above information, exploring the factors that impact credit card spending behavior among people in Bangkok is the objective for this study. In addition, age, income, occupation, marital status, benefit's given (BPB), qualification of applying credit card (BPQ), payment policies (BPP), willingness to pay (ATMW), awareness about the total debt owed (ATMA), and management of income and expenses (ATMM) are identified and analyzed the impact on Spending behavior of credit card holders (SB).

## **2. Literature Review**

### *2.1 Bank's Policies*

Policy is the plan or idea to instruct in a specific circumstance that has been agreed to be formally within a group or organization (Cambridge University Press, 2018); hence, banks policies are the plans for each particular issue to be officially that has been agreed within bank. Bank's Policies can be represented by benefits' given by bank, qualification of applying credit card, and payment policies (Teoh, Chong, & Yong, 2013).

### *2.2 Benefits Given by Bank*

Benefit is an advantage or privilege received from something (Oxford University Press, 2018); thus, benefits given by bank are the advantages that bank provide to their card holders. According to the settled situation of credit card market (Lindley, Rudolph, & Selby, 1989), Credit card issuers are competing with their competitors with the aggressive marketing to maintain existing customers and acquire new customers (Devlin, Worthington, & Gerrard, 2007). The intention to use the service of customers can be increased if the perceived benefits are increased (Wang, Lin, & Luarn 2006). There are many offers that issuers provide to their customers such as free-of-charge for annual fees, cashback, membership reward points, miles collection for airline, installment plan, savings at point-of-sale (American Express (Thai) Co., Ltd., 2018; Citigroup Inc., 2018; Krung Thai Card PCL., 2018)

### *2.3 Qualifications of Applying Credit Card*

Qualification is the condition or requirement that must be completed to get the right to be qualified (Oxford University Press, 2018); therefore, qualification of applying credit card is the requirement or condition from bank that applicants need to be completed before they get their card approval. In the past, it was very difficult to get a credit card due to many required documents (Teoh et al., 2013). However, the required document right now is only photocopy of ID card, current month pay slip, and updated last three months bank statement of personal account for some issuers (Citigroup Inc., 2018; Krung Thai Card PCL., 2018; Krungsriayudhya Card Co., Ltd., 2018; The Siam Commercial Bank PCL., 2018). Moreover, the staff of issuers can help the applicants to complete the application to reduce the complexity and make the registration easier (Teoh et al., 2013).

### *2.4 Payment Policies*

Payment is an action to return the money to the creditor (Cambridge University Press, 2018). Policy is the plan or idea to instruct in a specific circumstance that has been agreed to be formally within a group or organization (Cambridge University Press, 2018). So, payment policies are the policy that creditors setup to make sure that debtors need to follow for the money return. Regarding to American credit card market, there are two types of credit card users which are transactors and revolvers (Block, 2007; JD Power & Associates, 2012).

Transactors are the people who always pay-off all balances in their statement while revolvers are the person who do not want to pay-off all balances in their statement (JD Power & Associates, 2010). Many of the credit card issuers allow their card holders to pay the debt at minimum required amount of the statement and the principal and interest can be paid later (Akin, Aysan, Kara, & Yildiran, 2008). This policy is very famous in Thailand, there are many issuers apply this policy for their card holders as an option (Kasikornbank PCL., 2018; Citigroup Inc., 2018; United Overseas Bank (Thai) PCL., 2018).

## *2.5 Attitudes toward Money*

Attitude is the psychological point of view of a person; it can describe the thinking and characteristics of that person (Perloff, 1993). Then, attitudes toward money are the personal point of view or feelings of a person towards the with money. According to the intellectual point of view, attitude towards money is that money leads to accomplishment (Soo Hoon & LIM, 2001). Attitude can be explained by willingness to pay, awareness about total debt owed management of income and expenses (Teoh et al., 2013).

## *2.6 Willingness to Pay*

Willingness to pay is the maximum amount of money that consumer will pay for a product (Varian, 1992). For credit card holder, it means the maximum amount that they will pay back the outstanding balance. As many issuers allow their card holders to pay the debt at minimum required amount of the statement and the principal and interest can be paid later (Akin et al., 2008). Regarding to the consumers in credit card market, some people perceived that it just only consumption, but others think that it is a form of investment based on consumption (Wang, Lv, & Jiang, 2011). In Thailand issuers have clear cycle cut and due date in their statements (LINE Corporation, 2018), there are fifty-eight percent of Thai people who paid the credit card statement at minimum required amount and they perceived that the interest is acceptable (Bangkok Post, 2017). In addition, credit card debt pay-off is one of the top five reasons that Thai people loan money (Bangkokbiznews, 2015).

## *2.7 Awareness about Total Debt Owed*

Awareness is the ability to understand the circumstance or the subject at a particular time based on data or experience (Cambridge University Press, 2018); then, awareness about total debt owed is the understanding of the total debt amount of debtor is having with creditor. Debt has become a buzzword since 1980; debt is one of the life's greatest taboos (Johnson, 1989). In-Debt risk is more aware by the households. Financial awareness is the factor that helps UK students to better manage their own debt (Marriott, 2007). In Thailand, many issuers are providing the monthly statement service for their card holders to check the outstanding balance in detail (American Express (Thai) Co., Ltd., 2018; Bangkok Bank PCL., 2014; Citigroup Inc., 2018).

## *2.8 Management of Income and Expenses*

Income is the money that earned from work or business, expense is the spending of money; thus, expense management is the money spending management (Cambridge University Press, 2018); therefore, management of income and expenses is the plan to control for the earned money and the spending. Households are more likely to make their own money portion to fit with the debt portion based on their perceived risk; higher debt, spend less and save more (Kukk, 2017). Many credit card holders are not able to recall the exactly amount that they spent (Soman, 1999). The bad personal financial management can lead to debt, especially informal debt (Phosri, Sangwichitr, Jirathumrong, & Intara, 2016). In Thailand, Y generations; who are twenty one to thirty eight years old, averagely spent THB 113,000 on their credit card per year, this amount is more than their average monthly income which is only THB 20,000, this group of people has higher delinquency risk compared with other age ranges (Si-Phaya Publishing Co Ltd., 2018).

## *2.9 Spending Behavior of Credit Card Holders*

Spending behavior is the act of using money to that response to the personal satisfaction (UKEssays, 2018). Spending behavior is the subset of customer behavior, the business that understand on how the consumers purchase the products with the reasons behind likely to make profit from their understanding because the cost of maintaining existing customer is a lot lower than acquiring new customer cost (Durmaz, Y. & Diyarbakırlıoğlu, I., 2011). The spending behavior of loyal customer tends to be more frequently compared with general customer (Hawkins, Best, & Coney, 1995).

## **3. Research Framework and Methodology**

### *3.1 Hypotheses*

To complete the research objective, the hypotheses are conducted as below.

H1: There is a significant mean different among age toward credit card holder's spending behavior.

H2: There is a significant mean different among income level toward credit card holder's spending behavior.

H3: There is a significant mean different among occupation toward credit card holder's spending behavior.

H4: There is a significant mean different among marital status toward credit card holder's spending behavior.

H5: Benefits given by bank (H5a), Qualification of applying credit card (H5b), and Payment policies (H5c) have significant impact on credit card holder's spending behavior.

H6: Willingness to pay (H6a), Awareness about total debt owed (H6b), and Management of income and expenses (H6c) have significant impact on credit card holder's spending behavior.

### *3.2 Conceptual Framework*

The conceptual framework of this study (Figure 1) is taken from the abstract idea of Teoh, Chong, and Yong (2013) who combines all variables into completed conceptual framework.

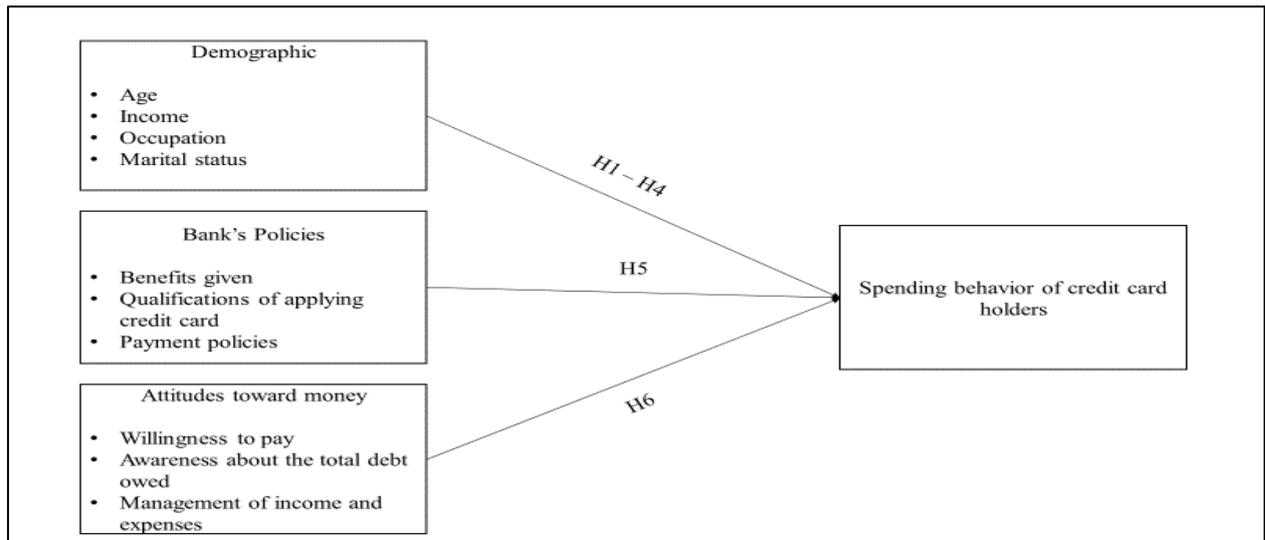


Figure 1: Conceptual Framework

### 3.3 Research Methodology

The methodology that applied for this study is convenience sampling and quota sampling which are under non-probability sampling. In addition, the questionnaires are distributed in the internet which is the most convenient channel to collect the information by using Google Forms. There are three parts in the questionnaire; screening, Likert, and demographic. In addition, One-Way ANOVA and Multiple Linear Regression are applied for the result measurement as well.

### 3.4 Measurement Variable

All variables including bank's policies, benefits given by bank, qualifications of applying credit card, payment policies, attitudes toward money, willingness to pay, awareness about total debt owed, management of income and expenses are adopted from Teoh, Chong, and Yong (2013) while spending behavior of credit card holders is adopted from Rezaei, Mazaheri, and Azadavar (2017). The measurement of bank's policies and attitudes toward money is 5 points Likert Scale; ranking from (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree (Barnette, 2000). The measurement of spending behavior is frequency scale; (1) 1 time per month, (2) 2 – 3 times per month, (3) 4- 5 times per month, (4) 6-7 times per month, and (5) more than 8 times. Apart from frequency scale, average monthly spending range also applied for spending behavior measurement as well; (1) Lower than THB 10,000 (2) THB 10,000 – THB 20,000, (3) THB 20,001 – THB 30,000, (4) THB 30,001 – THB 40,000, (5) THB 40,001 – THB 50,000, and (6) THB 51,000 and above.

### 3.5 Population and Sample

The target population of this study is People who live in Bangkok consecutively longer than 6 months, own credit card, and used it within 6 months. The size of population cannot be specifically identified due to no official report. The sample size is measured by the unknown population (Sangren, 1999) considered standardized score is 95% and acceptable error level is 5%.

$$n = \frac{Z^2}{4e^2}$$

n is sample size, Z is standardized score (descriptive statistics) or Z-statistic 95%, e is acceptable error  $\pm 5\%$

When the formula is applied, the sample size is approximately closed to 403 samples. Hence, 403 samples are valid for this study.

### 3.6 Reliability Test

Cronbach's Alpha Coefficient was applied to measure the reliability of each interval scale type of variable in the questionnaire, there is mandatory for all variables that should meet at least 0.6 Cronbach's Alpha value for pilot testing (Cronbach, 1951). Hence, all variables are valid and reliable to include in the questionnaire and ready to deploy to target respondents.

Table 1: Reliability Test (N=38)

Variables	Cronbach's alpha	Number of items
Benefits given	0.879	3
Qualifications of applying credit card	0.817	4
Payment policies	0.899	2
Willingness to pay	0.634	5
Awareness about the total debt owed	0.932	5
Management of income and expenses	0.864	4

## 4. Result and Discussion

### 4.1 Data Analysis

The statistical tool that applied for the hypothesis analysis is Multiple Linear Regression (MLR) while One Way ANOVA is used to test the difference between demographics information that associate with credit card spending behavior of credit card holders.

### 4.2 Demographic Profile Summary

All respondents are the person who have their own credit cards and used it within 6 months; all of them also live in Bangkok longer than consecutively 6 months. More than half of total respondents are young to middle age people; 41.7% is 21 – 30 years old, 32.3% is 31 – 40 years old, 19.6% is 41 – 50 years old, 5.2% is 51 – 60 years old, and 1.2% is 61 years old and above. The monthly income of the respondents are in almost equal proportion; 19.9% has monthly income less than THB 20,000, 20.1% has monthly income THB 20,001 – THB 30,000, 20.3% has monthly income THB 30,001 – THB 40,000, 19.9% has monthly income THB 40,001 – THB 50,000, and 19.9% has monthly income more than THB 50,000. Majority of respondents are working people; 1% is student, 73.4% is company employee, 20.1% is business owner, 2% is freelance, and 3.5% is others. Most of the respondents are not married; 63% is single, 36.7% is married, and 0.2% is others. The credit card amount of respondents are spread; 19.6% has only 1 card, 38% has 2 – 3 cards, 22.3% has 4 – 5 cards, and 20.1% has more than 5 cards. The card that respondents frequently used are scattered as well; 20.1% is Kbank card, 14.9% is KTC card, 6.5% is BBL card, 16.1% is SCB card, 7.99% is Citibank card, 13.6% is BAY card, 4.7% is TMB card, 2.7% is Tbank card, 1% is UOB card. 12.2% is AMEX card, 0.2% is others.

Table 2: Demographic Profile

<b>Demographic</b>	<b>Characteristics (N=403)</b>	<b>Frequency</b>	<b>Percent</b>
Age	21 - 30 years old	168	41.7
	31 - 40 years old	130	32.3
	41 - 50 years old	79	19.6
	51 - 60 years old	21	5.2
	61 years old and above	5	1.2
Income	Less than THB 20,000	80	19.9
	THB 20,000 – THB 30,000	81	20.1
	THB 30,001 – THB 40,000	82	20.2
	THB 40,001 – THB 50,000	80	19.9
	More than THB 50,000	80	19.9
Occupation	Student	4	1.0
	Company Employee	296	73.4
	Business owner	81	20.1
	Freelance	8	2.0
	Others	14	3.5
Marital Status	Single	254	63.0
	Married	147	36.5
	Others	2	.5
<b>Demographic</b>	<b>Characteristics (N=403)</b>	<b>Frequency</b>	<b>Percent</b>
Credit Card Amount	1 card	79	19.6
	2 – 3 cards	153	38.0
	4 – 5 cards	90	22.3
	More than 5 cards	81	20.1
Card that Frequently Used	Kasikorn Bank (Kbank)	81	20.2
	Krungthai Credit Card (KTC)	60	14.9
	Bangkok Bank (BBL)	26	6.5
	Siam Commercial Bank (SCB)	65	16.1
	Citibank	32	7.9
	Krungsri Ayudhya Bank (BAY)	55	13.6
	Thai Military Bank (TMB)	19	4.7
	Thanachart Bank (TBank)	11	2.7

	United Overseas Bank (UOB)	4	1
	American Express (AMEX)	49	12.2
	Others	1	0.2

### 4.3 Descriptive Analysis

#### 4.3.1 Pearson's Correlation

Table 3: Correlation Matrix (H5 – H6)

Variable	Mean	SD	SB	BPB	BPQ	BPP	ATMW	ATMA	ATMM
SB	4.63	1.764	1						
BPB	3.70637	0.92150	0.128*	1					
BPQ	3.3468	0.90994	0.139*	0.507*	1				
BPP	2.493	1.1411	-0.266*	-0.284*	-0.006	1			
ATMW	3.941	0.8069	-0.144*	0.567*	0.47*	-0.085	1		
ATMA	4.208	0.8957	-0.14*	0.642*	0.459*	-0.1	0.761*	1	
ATMM			-0.333*	-0.133*	-0.201*	0.5*	-0.138	0.024	1

Note: \* means Correlation is significant at 0.05 (One tailed)

According to Pearson's Correlation Matrix, H5 – H6 are showed in table 3, some variables have positive relationship to each other while some variables have negative relationship to each other. Some of them have P-value less than 0.05 while some of them have P-value over 0.05. Regarding to level of correlation strength (Evans, 1996), the relationship of the variable can be identified based on the value in Pearson Correlation table. Below are the ranges to identify relationship between variable.

Hence, it can imply that payment policies (BPP) and management of income and expenses (ATMM) have weak relationship with spending behavior of credit card holders; benefits given (BPB), qualifications of applying credit card (BPQ), willingness to pay (ATMW), and awareness about the total debt owed (ATMA) have weak relationship with credit card holder's spending behavior (SB). Furthermore, awareness about total debt owed (ATMA) has strong relationship with benefits given (BPB); qualifications of applying credit card (BPQ) and willingness to pay (ATMW) have moderate relationship with benefits given (BPB); payment policies (BPP) has weak relationship with benefits given (BPB); management of income and expenses (ATMM) has very weak relationship with benefits given (BPB). In addition, willingness to pay (ATMW) and awareness about total debt owed (ATMA) have moderate relationship with qualifications of applying credit card (BPQ); management of income and expenses (ATMM) has weak relationship with qualifications of applying credit card (BPQ); payment policies (BPP) has very weak relationship with qualifications of applying credit card (BPQ). Moreover, willingness to pay (ATMW), awareness about the total debt owed (ATMA), management of income and expenses (ATMM) have very weak relationship with payment policies (BPP). Subsequently, awareness about the total debt owed (ATMA) has strong relationship with willingness to pay (ATMW); management of income and expenses (ATMM) has very weak relationship with willingness to pay (ATMW). Lastly, management of income and expenses (ATMM) has weak relationship with awareness about the total debt owed (ATMA). The independent variables that have negative relationship with credit card holder's spending behavior (SB) are payment policies (BPP), willingness to pay

(ATMW), awareness about the total debt owed (ATMA), management of income and expenses (ATMM). On the other hand, the independent variables that have positive relationship with credit card holder's spending behavior (SB) are benefits given (BPB) and qualifications of applying credit card (BPQ).

#### 4.4 Inferential Analysis and Multicollinearity Validation

Table 4: One-Way ANOVA result for H1, Dependent Variable: Spending Behavior

<b>ANOVA</b>					
Spending Behavior					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	140.045	4	35.011	12.549	0.000
Within Groups	1110.377	398	2.790		
Total	1250.422	402			

The above table represents the mean difference among age toward credit card holder's spending behavior (SB);  $F(4, 398) = 12.549$ ,  $P = 0.000$ . So, H1 is supported.

Table 5: Scheffe's Post hoc Test Result for H1

<b>(I) Age</b>		<b>Mean Difference (I-J)</b>
<b>21 - 30 years old</b>	31 - 40 years old	-0.517
	41 - 50 years old	-1.575*
	51 - 60 years old	-1.060
	61 years old and above	-0.917
<b>31 - 40 years old</b>	21 - 30 years old	0.517
	41 - 50 years old	-1.058*
	51 - 60 years old	-0.543
	61 years old and above	-0.400
<b>41 - 50 years old</b>	21 - 30 years old	1.575*
	31 - 40 years old	1.058*
	51 - 60 years old	0.515
	61 years old and above	0.658
<b>51 - 60 years old</b>	21 - 30 years old	1.06
	31 - 40 years old	0.543

	41 - 50 years old	-0.515
	61 years old and above	0.143

<b>(I) Age</b>		<b>Mean Difference (I-J)</b>
<b>61 years old and above</b>	21 - 30 years old	0.917
	31 - 40 years old	0.4
	41 - 50 years old	-0.658
	51 - 60 years old	-0.143

Note: \* represents mean difference with P-value  $\leq 0.05$ .

According to the above table outcome, analysis of variance shows that there is difference of credit card holder's spending behavior (SB) between two group of ages which are "21 – 40 years old" and "41 years old and above".

Table 6: One-Way ANOVA Result for H2, Dependent Variable: Spending Behavior

<b>ANOVA</b>					
Spending Behavior					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	669.035	4	167.259	114.500	0.000
Within Groups	581.387	398	1.461		
Total	1250.422	402			

The above table represents the mean difference among income toward credit card holder's spending behavior (SB);  $F(4, 398) = 114.500$ ,  $P = 0.000$ . Hence, H2 is supported.

Table 7: Scheffe's Post hoc Test Result for H2

<b>(I) Income</b>		<b>Mean Difference (I-J)</b>
<b>Less than THB 20,000</b>	THB 20,000 – THB 30,000	-.868*
	THB 30,001 – THB 40,000	-2.813*
	THB 40,001 – THB 50,000	-2.800*
	More than THB 50,000	-3.325*
<b>THB 20,000 – THB 30,000</b>	Less than THB 20,000	.868*
	THB 30,001 – THB 40,000	-1.945*
	THB 40,001 – THB 50,000	-1.932*
	More than THB 50,000	-2.457*
<b>THB 30,001 – THB 40,000</b>	Less than THB 20,000	2.813*

	THB 20,000 – THB 30,000	1.945*
	THB 40,001 – THB 50,000	0.013
	More than THB 50,000	-0.512
<b>THB 40,001 – THB 50,000</b>	Less than THB 20,000	2.800*
	THB 20,000 – THB 30,000	1.932*
	THB 30,001 – THB 40,000	-0.013
	More than THB 50,000	-0.525
<b>More than THB 50,000</b>	Less than THB 20,000	3.325*
	THB 20,000 – THB 30,000	2.457*
	THB 30,001 – THB 40,000	0.512
	THB 40,001 – THB 50,000	0.525

Note: \* represents mean difference with P-value  $\leq 0.05$ .

The variance analysis regarding to the outcome of above table, it shows that there are difference of credit card holder's spending behavior (SB) among income (monthly) which are "less than THB 20,000", "THB 20,000 – THB 30,000", and "THB 30,001 – more than THB 50,000".

Table 8: One-Way ANOVA Result for H3, Dependent Variable: Spending Behavior

<b>ANOVA</b>					
Spending Behavior					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	63.578	4	15.894	5.330	0.000
Within Groups	1186.844	398	2.982		
Total	1250.422	402			

The result from Table 8 shows mean difference among occupation toward credit card holder's spending behavior (SB);  $F(4, 398) = 5.330$ ,  $P = 0.000$ . Thus, H3 is supported.

Table 9: Scheffe's Post hoc Test Result for H3

<b>(I) Occupation</b>		<b>Mean Difference (I-J)</b>
<b>Student</b>	Company Employee	-0.720
	Business owner	-1.633
	Freelance	-0.125
	Others	-0.464
<b>Company Employee</b>	Student	0.720
	Business owner	-.913*
	Freelance	0.595
	Others	0.255
<b>Business owner</b>	Student	1.633

	Company Employee	.913*
	Freelance	1.508
	Others	1.168
<b>Freelance</b>	Student	0.125
	Company Employee	-0.595
	Business owner	-1.508
	Others	-0.339
<b>Others</b>	Student	0.464
	Company Employee	-0.255
	Business owner	-1.168
	Freelance	0.339

Note: \* represents mean difference with P-value  $\leq 0.05$ .

The analysis of variance from above table shows the difference of credit card holder's spending behavior (SB) among occupation which are business owner and company employee.

Table 10: One-Way ANOVA Result for H4, Dependent Variable: Spending Behavior

<b>ANOVA</b>					
Spending Behavior					
	Sum Squares	of df	Mean Square	F	Sig.
Between Groups	14.903	2	7.452	2.412	0.091
Within Groups	1235.519	400	3.089		
Total	1250.422	402			

The above table shows mean difference among gender toward credit card holder's spending behavior (SB);  $F(2, 400) = 2.412$ ,  $P = 0.091$ . Therefore, H4 is not supported.

Table 11: Scheffe's Post hoc Test Result for H4

<b>(I) Marital Status</b>		<b>Mean Difference (I-J)</b>
Single	Married	-0.321
	Others	1.516
Married	Single	0.321
	Others	1.837
Others	Single	-1.516
	Married	-1.837

The analysis of variance from above table shows that there is no difference of credit card holder's spending behavior (SB) among marital status.

Table 12: Multiple Linear Regression Result for H5a – H5c and H6a – H6c, Dependent Variable: Spending Behavior

Hypothesis	Variable	Standardized Coefficient	VIF	Result
		( $\beta$ )		
H5a	Benefits Given by Bank	0.238*	2.127	Supported
H5b	Qualifications of Applying Credit Card	0.177*	1.595	Supported
H5c	Payment Policies	-0.117*	1.573	Supported
H6a	Willingness to Pay	-0.278*	2.646	Supported
H6b	Awareness about Total Debt Owed	-0.168*	3.049	Supported
H6c	Management of Income and Expenses	-0.241*	1.566	Supported
<b>R Square</b>	0.23			
<b>Adjusted R Square</b>	0.218			

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$ .

The outcome of the above table shows that  $R^2$  is 0.23 which means that 23% of all independent variables including benefits given (BPB), qualifications of applying credit card (BPQ), payment policies (BPP), willingness to pay (ATMW), awareness about the total debt owed (ATMA), and management of income and expenses (ATMM) can explain the dependent variable which is credit card holder's spending behavior (SB) at 0.05 significant levels or 95% confident level.

Benefits given (BPB), qualifications of applying credit card (BPQ), willingness to pay (ATMW), payment policies (BPP), awareness about the total debt owed (ATMA), and management of income and expenses (ATMM) have P-value less than 0.05 which means H5a, H5b, H5c, H6a, H6b, and H6c are supported.

As a result, payment policies (BPP) and qualifications of applying credit card (BPQ) have significant impact on credit cardholder's spending behavior (SB) at the Standardized Coefficients (Beta) 0.238 and 0.177 respectively. It can be concluded that benefits given (BPB) and payments policies (BPP) have positive relationship with credit card holder's spending behavior (SB) regarding to Standardized Coefficients reported in the Table 3.

Apart from these mentioned two independent variables, it also implies that payment policies (BPP), willingness to pay (ATMW), awareness about the total debt owed (ATMA), and management of income and expenses (ATMM) have significant impact on credit card holder's spending behavior (SB) at the Standardized Coefficients (Beta) -0.117, -0.278, -0.168, and -0.241 respectively. It can be concluded that payment policies (BPP), willingness to pay (ATMW), awareness about the total debt owed (ATMA), and management of income and expenses (ATMM) have negative relationship with credit card holder's spending behavior (SB) regarding to Standardized Coefficients reported in the Table 3.

There is no critical issues on this study due to all variance inflation factors (VIFs) are not exceed 5.00 as validate the multicollinearity problem was verified.

## 5. Conclusion and Recommendations

According to the outcomes of One-Way ANOVA and Multiple Linear Regression, there are significant mean different among many demographic factors toward credit card holder's spending behavior which are age, income and occupation. On the other hand, there is no significant mean different among marital status toward credit card holder's spending behavior. In addition, Multiple Linear Regression result shows that payment policies, willingness to pay, and management of income and expenses have significant impact on pending behavior of credit card holders. There are many articles that support the result of this study. According to the article of Si-Phaya Publishing Co Ltd. (2018), Y-generation group (21 – 38 years old) spend half of their expense on credit card and this group tend to have high chance to be defaulted; it supports that different among age toward credit card holder's spending behavior (H1), it also support that management of income and expenses has significant impact on credit card holder's spending behavior (H6c). Furthermore, MoneyGuru Co., Ltd. (2017) mentioned that the main reason that credit card holders pay minimum amount on their statement balance is they want to buy the luxury products those they are not affordable, it means that payment policies can make purchase value higher than usual value that card holder is affordable, it also supports the hypotheses; payment policies has significant impact on credit card holder's spending behavior (H5c) and willingness to pay has significant impact on credit card holder's spending behavior (H6a). Moreover, the article of Interspace (Thai) Co., Ltd. (2015) state that credit card holders tend to spend more if they have more income, it supports that there is a significant mean different among income level toward credit card holder's spending behavior (H2). Lastly, Interspace (Thai) Co., Ltd. (2015) mentioned that the credit card using behavior of company employee and business owner are different from each other, it supports that there is a significant mean different among occupation toward credit card holder's spending behavior (H3).

As result, there is significant mean different among each group of age, income, and occupation toward credit card holder's spending behavior are supported whereas willingness to pay and management of income and expenses also have significant impact on credit card holder's spending behavior. While management of income and expenses (ATMM) is the independent variable that has most impact that is considered by Standardized Coefficient at - 0.241.

For recommendations, bank issuer should focus on benefits given (BPB), qualifications of applying credit card (BPQ), and willingness to pay (ATMW), awareness about total debt owed (ATMA), and management of income and expenses (ATMM).

Firstly, the attractive offers for the first-time application will help to stimulate the spending such as free-gift or extra reward points when customers got approval on his/her card and spend on the minimum requirement. It will encourage card holders to spend on his/her card more than usual to get free-gift or extra reward points.

Most importantly, flexible pay plan on statement and credit term maximization will also able to boosts up the spending of credit card holders as well. When card holders reach to their affordable limits, installment plan on statement will help credit card issuer to boots up the spending amount as well. Furthermore, extension of interest-free installment plan will be other alternative marketing programs that will reduce monthly payment and stimulate the spending to be higher than usual.

## 6. Limitation and Future Research Directions

Firstly, credit card spending behavior can be changed any time; therefore, it is very difficult to estimate the spending behavior of people. The suggestion for this issue is using the most updated information as a reference will support the study to get along with the current situation, the most updated information will lead to the most accurate and reliable result of the study. In addition, it is possible that the collected questionnaire data may not represent the attitude of the majority of people in Bangkok. As Bangkok has many districts within Bangkok area, quota sampling method in district level will support the data to be most accurate and reliable.

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# A CONCEPTUAL MODEL OF THE ANTECEDENTS OF ORGANIC COSMETIC REPURCHASE INTENTION

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## **Abstract**

Nowadays, human tend to enhance beauty outside from organic cosmetic products that widely used around developed countries, but quite strange with Vietnamese customers. Besides that, repurchase intention is a significant factor that directly impacts to company and market growth. So this paper, framed in the final stage of an ongoing research project, aims to review the relevant literature on organic cosmetic repurchase intention. The expected findings of this element are able to not only help develop the Vietnamese organic market but also improve human health. The contribution of this paper lies with the proposal of a conceptual model on repurchase intention on the less studied perspective of the organic product. A future research, it is suggested to examine the proposed conceptual model.

**Keywords:** *Organic Cosmetic, Repurchase Intention, Attitude towards Organic Cosmetic Product.*

## **1. Introduction**

On the demand side, the customers have more positive sight with the organic product than others, due to being healthier (Beharrel and MacFie, 1991). The statistic described that the consumption degree on organic products remarkably went up (Verhoef, 2005). For instance, the German collected the revenue from selling the green staples about €2.05 billion in 2000, compared with that figure in 2004, grew up to €3.5 billion. Furthermore, organic products is stably developing in 2014 by 7.4%, the sale volume of organic products soared from €22.4 to €47.4- about 110% (IFOAM-EU, 2016). Besides that the organic cosmetic also have significant consumption in America, Australia, and EU. The market show that the sale volume of organic cosmetic in the United States was achieved about \$700 million in 2015, and this figure will be able to increase to \$1.650 million in the next ten-year period.

According to the Luu (2017), about 80% citizens buy at least one cosmetic product in year, in that one fourth of the cost of personal care is spent on beauty products. Specially, the demand for green cosmetics is on the rise. Vietnamese and French women have same demand to use the organic products- consumption degree fluctuates from 20-50%. Therefore, human have a trend to purchase and using the natural and organic products, such as food, article of daily necessity, personal care products. Because they interested in not only enhance appearance but also maintain healthy.

Almost previous researchers focus on the customer willing to buy organic cosmetic products in the developed and developing countries context, such as in USA (Kim & Seock, 2009; Kim & Chung, 2011), in Greece (Tsakiridou, et al., 2008), in Taiwan (Hsu, et al., 2017); and in Malaysia (Abd Rahman, et al., 2015), in India (Pudaruth, et al., 2015) and in Vietnam (Nguyen, 2014). While there is a little study re-buying behavior of customer toward organic cosmetics (Ghazali, et al., 2017). Therefore, some of the outcomes from the previous researches that is able to apply factors to research this study. The researchers complete this

study to observe Vietnamese consumers' establishment to repurchasing organic cosmetic and analyze main determinants on attitude toward repurchasing organic cosmetic and customer satisfaction. Besides that, investigating correlation among attitude, customer satisfaction, green perceived value, and repurchase intention. The result of the study is able to provide useful information about the attitude towards repurchasing toward organic cosmetic products, identify the level of significance of these factors and help manager to propose managerial implication to enhance customer repurchase intention organic products.

## **2. Literature Review**

In this section, discussion about the factors influence on repurchasing intention organic cosmetic products that is presented based on previous studies. Literature review used to show correlation among factors and repurchase intention in Vietnam

### *2.1 Organic Cosmetic*

According to Department of Food and Drug Administration (FDA-US Law, 2017) and to the Regulation of European Parliament and of the Council on cosmetic products (EC-2009), all products (except pure soap) be used in the outside surface of human for purifying, adornment, enhancement of attractiveness or change of appearance without affecting the structure or function of the body by lubricated, sprayed, sprinkled, and so on, which is called cosmetic product. The kind of cosmetics include skin care product (lip treatment, mask, cleanse...), make-up product (lipstick, mascara, eye-shadow, foundation, perfume...), bath & body product (body lotions, shower gel...), hair products (shampoo, gel, hairspray, etc.), and aroma products (perfume, body sprays & mists) (Schneider, et al., 2000). Cosmetic is used in many difference case by lady, which affect high positive on women's life and work environment because of directing effect on perceived personality (exalt their outside and self-perception) (Nash, et al., 2006).

The USDA, the True Friends of Natural and Organic Cosmetics, BDIH, Cosmebio, Ecocert, ICEA, and the Soil Association are global organic certifications. The standard system of organic cosmetic given by the True Friends of Natural and Organic Cosmetics (Natrue, 2017) is rated 2 types' organic cosmetics: (i) organic cosmetic is at least 95% of the natural ingredients is made from organic farm and/or wild collection which is certified by an authority organic standard or regulation permissive in the IFOAM-Organics International; and (ii) natural cosmetics with an organic portion including the product has at least 70% of the natural ingredients is made from organic farm and/or wild collection which is certified by an authority organic standard or regulation permissive in the IFOAM-Organics International. While, according to the Ecocert in France, "organic cosmetic" much has at least 95% natural and 10% organic ingredient that is compared to the product's weight.

### *2.2 Repurchase Intention*

The willing to buy has a significant relationship with the re-buying intention. Users who have optimistic experience with goods or brand easily lead to willing to pay same figure in the future. Re-buying purpose is a behavior element that shows customer's hunger, desire and willing to purchasing a product or brand again, which is based on individual consumption experiences (Mittal, et al., 1998). It represents the customer's interest, attraction, and satisfaction in the service, as well as the quality when buying a product or brand. Following to the previous research of Anderson, et al (1994); Chiu, et al., (2009); the pleasure, product's convenience, ease to purchase, and good experience will lead to the repurchase in the future.

Attitude and satisfaction of customers will show their viewpoint in repeat purchase activities. The re-buying intention describes customer loyalty degree and measure net profit of a company (Ahn, et al., 2004). The degree of customer' re-consumption intention has the positive ratio with the company's profit and sustainable growth (Hennig-Thurau and Klee, 1997). The company has high retention degree, which is more great competitive advantage than others. Comprehending the domination factors of the customer's acquisition intention will become a sustainable competitive advantage of enterprise. Therefore, exposing the influence factors of customer repurchase intention is essential for all top managers.

### 2.3 Previous studies

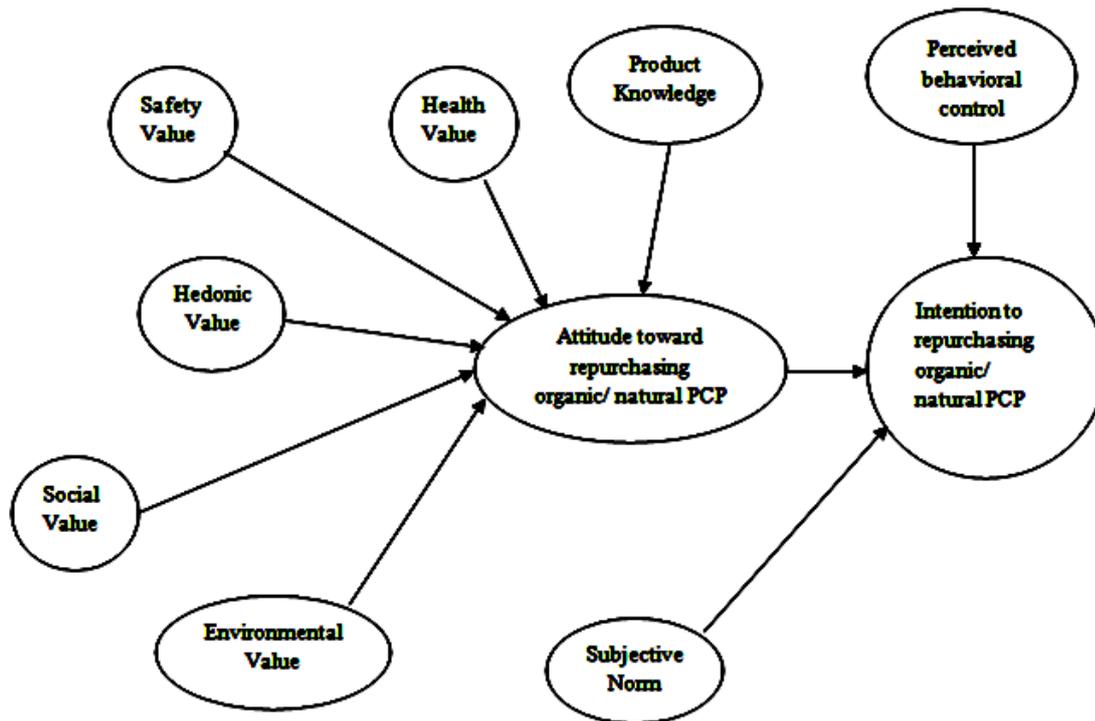
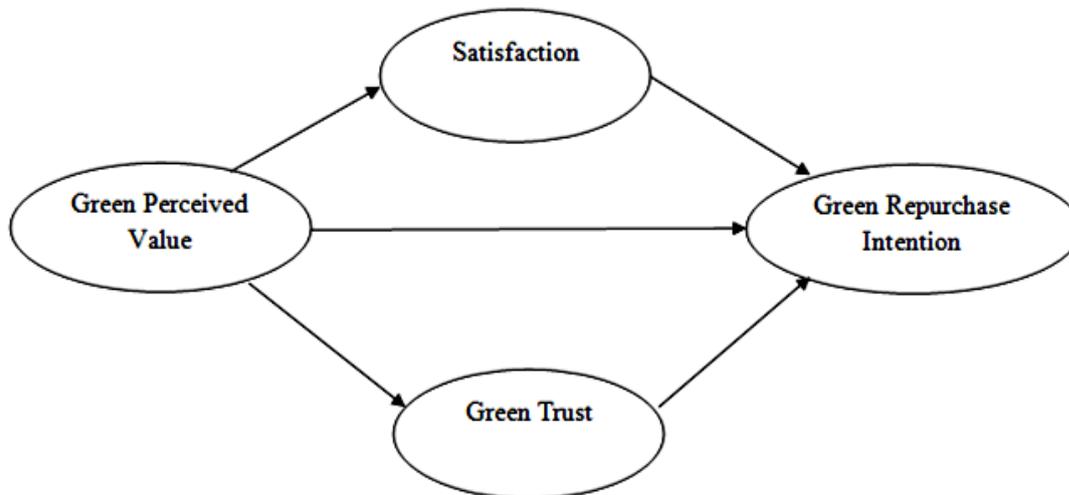


Figure 4: The design of influencing components consumer viewpoint and purpose to re-obtain organic cosmetic

(Source: Ghazali, et al., 2017)

In accordance with the Figure 1, Ghazali, et al., (2017) considered about the repurchase intention on green personal care products (PCP) by applying the integration of TPB. Having 317 Malaysian respondents completed the self-administered questionnaire that was established basic on sub-factor, independent and dependent factor. The research presented that the attitude toward re-buying organic PCP has the most significant positive linking product knowledge, followed by hedonic value, health value, environmental value, and safety value. Furthermore, the most significant factor affecting of repurchase intention is attitude toward re-buying organic/natural PCP, in turn perceived behavior control. By contrast, the social value and subjective norm is not determined any situation in this research framework.



*Figure 5: A model of components impact to willing re-buying toward green products*

(Source: Lam, et al., 2016)

Lam, et al., (2016) conducted a study about the repurchase intention toward the product that be able to reduce environmental pollution (Figure 2). The result is established by 180 answerers who have participation in used lightweight bottle- Bonaqua. The outcome denoted that three independent factors directly positive impact to the green repurchase intention, in that, the green trust is most significant influencing factors. Moreover, the green perceived value has optimistic effect to green trust and satisfaction, which helpful to indirectly influence the green re-buying intention.

### **Health consciousness, environmental concern, product knowledge, safety value, satisfaction, and attitude toward repurchasing organic cosmetic products**

Health consciousness evaluates about the prepared degree in participating healthy actions (Becker et al., 1977). In previous research, the interest of health is the principle motivations encourage purchase green yields (Lockie et al., 2002). Health concern customers have high level in conscious and care about enhance and sustain their fitness and standard life, such as precluding illness by self-awareness of health and participating healthy behavior (Gould, 1988; Newsom et al., 2005). This factor is determined a notable elements effect to the user's attitude toward organic products (Paksoy, et al., 2014; Yadav & Pathak, 2016). In the buying personal care products, human who have high knowledge about healthy value willing to pay more money for cosmetic products that make from natural, and/or cosmetic ingredients (Johri and Sahasakmontri, 1998). Health concern is self-awareness about nutrition system and health (Kraft & Goodell, 1993), create a confident impact on buying organic yields (Lockie, et al., 2002). In the cosmetic case, the customers who have high health concern will consider about the safety of product with skin, therefore they spent more focus on the benign ingredients of product than the other (Johri and Sahasakmontri, 1998). In the model of Ghazali (2017), health consciousness is one of factors impact to the attitude repurchasing intention toward organic personal care products. Hence, health consciousness positive effect on consumer attitudes toward purchasing and repurchasing organic cosmetic products. In summary of previous discussion, the first hypothesis is following:

*H1: Health consciousness positively affect to the consumer attitude toward repurchasing organic cosmetic products.*

Chan and colleagues (2000) define environmental concern is the individual feeling level toward environmental issue, they tend to pay more attention to ingredient of products and produce process (Grunet, et al., 1995). While organic cosmetic is as seen as eco-friendly products because of non-toxic and easy decomposable (Van Loo et al., 2013). Therefore, the environmental concern is seen as a primary step in developing organic consumption. Due to the eco-friendly products, process of producing organic cosmetics is operated without animal testing, chemical toxic, and synthetic chemicals (Prothero and McDonagh, 1992). The environmental attention is a basic step leading to purchase organic products for the environmental protection purpose (Dembkowski, 1998; Smith and Paladino, 2010). The previous researches of Kim and Chung (2011), Smith and Paladino (2010), Yadav & Pathak (2016), the green products are conveniently consumed by customers who have high environmental consciousness. Following to the model framework of Ghazali (2017), environmental concern is one of factors impact to the attitude repurchasing intention toward organic personal care products. Therefore, environmental concern positive impact on consumer attitudes toward purchasing and repurchasing organic cosmetic products. In sum, the researcher suggests the following hypothesis.

*H2: Environmental concern positive effect to the consumer attitude toward repurchasing organic cosmetic products.*

Knowledge is significant key leading to customer purchase decision, especially applying in organic products (Hill and Lynchehaun, 2002). If the customers haven't knowledge about information or high experience degree about the organic products' benefit, they will not buy its (Chrysochoidis, 2000). With some customers who have high level of education, they often want to find the way to growing organic product and have high positive attitude with this figure (Smith, et al., 2010; Nguyen, 2015) and being more able to consume the green yields (Wandel and Bugge, 1997). Furthermore, as shown in Figure 2, the knowledge about organic have high impact to the attitude repurchase intention toward organic or natural personal care products (Ghazali, et al., 2017). Therefore, product knowledge positively effects on consumer's attitude toward purchasing and repurchasing organic cosmetic products. After recapitulating the previous studies, the following hypothesis:

*H3: Product knowledge positive effect to the consumer attitude toward repurchasing organic cosmetic products.*

Food hygiene and safety is one of the top problems in the modern social, hence, human have a tendency to use organic food because healthy protection demands. In the previous study, above 50% customer buy the organic products in the first time because of non-chemical ingredient (Yin et al, 2010). Applying to the cosmetic case, human have high risk of cancer, respiratory disorders, and so on due to chemical ingredients such as paraben, lead, and others toxic elements. Besides, this figure is recognized far away non-toxic and chemistry ingredient that is made from origin plants and herbs. Safety consciousness is one of the reasons that stimulate consumer's positive attitude toward organic produce (Nguyen, 2015; Paksoy, et al., 2014). This figure is also helpful to boost the consumer attitude toward repurchasing organic or natural personal care products (Ghazali, et al., 2017), as shown in Figure 2. Therefore, safety value has optimistic influence on consumer's attitude toward purchasing and repurchasing organic cosmetic products. The discussion of previous studies leads us to the following hypothesis:

*H4: Safety value positive effect to the consumer attitude toward repurchasing organic cosmetic products.*

According to the role of satisfaction in a customer behavior model, the satisfaction directly impact to the attitude (Oliver, 1980). The figure shows that the satisfaction has significant influence on attitude degrees, which in turn influences customer's intention. Besides that an amount of previous studies demonstrated the positive relationship between satisfaction and attitude (Sivadas, et al., 2000; Davis and Heneike, 1994). In the case of repurchasing, the customer satisfaction also has high impact on customer attitude toward repurchase intention (Koelemeijer, 1993). After recapitulating the previous studies, the following hypothesis:

*H5: Customer satisfaction positive effect to the attitude toward repurchasing organic cosmetic products.*

According to Fishbein & Ajzen (1980), people often attend to an action when they have positive attitude with this action. Therefore, the previous studies of Van Loo, et al (2013); and Kim and Chung (2011) showed that customer who have high attitude with any product is easily purchase it. Amount of successful research about positive correlation between attitude and intention in consuming organic products (Smith & Paladino, 2010) such as green hotel (Han, et al., 2010); green cosmetic (Hsu, et al., 2017); organic yogurt (Van Loo, et al, 2013); organic skin/hair care products (Kim & Chung, 2011). In the repurchase case, the attitude have a significant role that leading to the consumer repurchase intentions, which has been confirmed based on studies about the re-buying Korean cosmetic of Thailand (Wangwiboolkij, 2012) and organic personal care product in Malaysia (Ghazali, et al., 2017). In sum, the research proposes the following hypothesis:

*H6: Attitude toward repurchasing organic cosmetic product positive effect to the consumer repurchases intention.*

### **Green perceived value, customer satisfaction and attitude toward repurchasing organic cosmetic products**

Perceived value is a general customer's assessment of the benefits received and the payment value of a product. Amount of previous researches of Cronin, et al., (2000); Keh and Sun, (2008) recognize an optimistic relationship between perceived value and customer satisfaction. Following to this theory, Chen and Chang (2012) determine the green perceived value is perceived value that is establish based on an environmental friendly expectation of customer. Numerous previous studies of Chen (2013); Lam, et al., (2016); and Sun, et al., (2016) set up a sanguineous correlation between GPV and the customer's pleasing. Therefore, the green perceived value positive impact to the customer satisfaction. Therefore, hypothesis 7 is established as follows:

*H7: Green perceived value positive effect to the customer satisfaction.*

Customer satisfaction is the result of comparison between anticipation and real indication after the trial period (Tse and Wilton, 1988). Hence, it easily understand when relate the satisfaction with the repurchase intention. Numerous previous researches of Bolton (1998), Cronin and Taylor (1992), and so on that supported to the positive relationship between them. This figure is the main factor leading to customer re-buying intention (Sharma and Patterson, 2000). According to the previous studies of Sun, et al (2016) and Nguyen (2015), the customer who is more satisfaction with a beauty product will tend high degree to pay money

for this cosmetic products again. Lam, et al (2016) research the influence rate of satisfaction on repurchase intention toward green products. These study shows that the customer satisfaction has positive development with the green repurchase intention. Therefore, the researcher is able to determine that the customer satisfaction is positive influence with the repurchase intention toward organic cosmetic products. The discussion of previous studies leads us to the following hypothesis:

*H8:* Customer satisfaction positive effect to the attitude toward repurchasing organic cosmetic products.

### Green perceived value and repurchase intention

In 2010, Zhuang, et al., determined that perceived value plays an essential role in buying intention. This is consistent with the Sweeney and Soutar (2001) evidence, if the perceived value is low, purchase intention will be decreased. This element help customer post-purchase behavior to positively ratio develops (Tam, 2004). Moreover, based on the demand for green products and environment protection, Chen and Chang (2012) create a research to confirm the optimistic linking between green perceived values and willing to pay green products. In 2013, Chen made another study to find out the positive connection between the value of green awareness value and the loyalty. Hence, the research recognize that green perceived value have high positively influence to green repurchase intention, in accordance with result of Lam (2016). Applying the previous results for this study, the researcher is able to confirm that green perceived value directly optimistic influence to organic cosmetic repurchase intention. In sum, the research proposes the final hypothesis, following:

*H9:* Green perceived value positive effects to the consumer repurchase intention toward organic cosmetic products

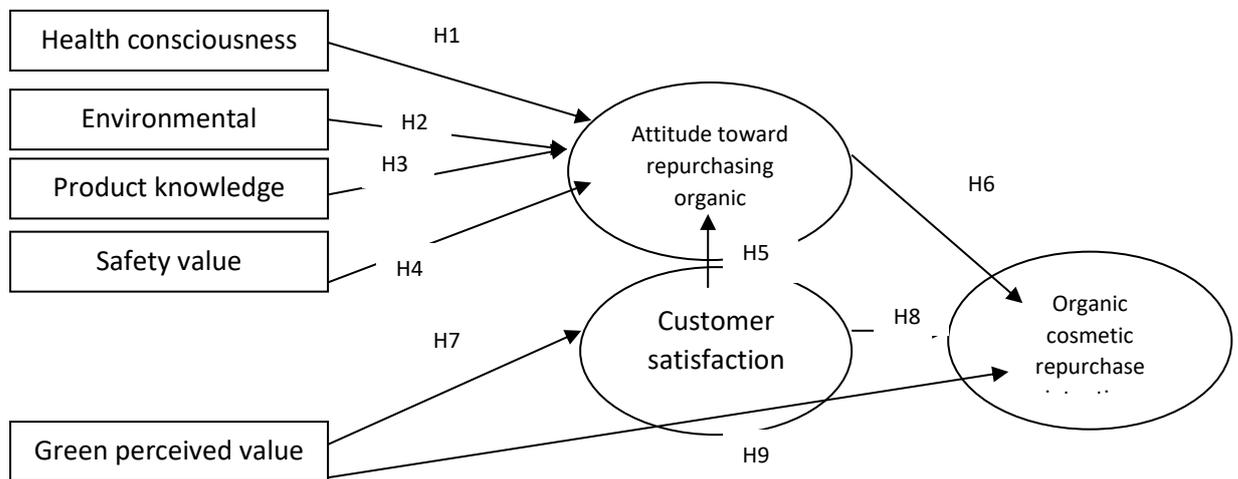


Figure 6: Proposed Conceptual Framework

### 3. Conclusion

In the modern life, human tend to tend to integrate more with nature to keep healthy and improve their lives, so that consuming environmentally friendly products is more and more attention. Moreover, re-consumption an organic product or brand will promote green market development and create precondition for establishing the organic products using habit. In

order to establish the model, the application of previous studies is necessary, however, the revision of these preceding limitations are also the reason for this research. By combining the models of repurchase intention that is impacted by customer satisfaction (Lam, et al., 2016) is affected by TPB theory (Ghazali, et al., 2017) - main focus on customer attitude. Whereby, the researcher is shown that the satisfaction, organic knowledge, health consciousness, environmental protection, and safety values are indirect positive influence on organic cosmetic repurchase intentions through customer attitudes. Moreover, the customer satisfaction and green perceived value are visual elements optimistic impact to the re-buying intention. In addition, this paper will help people who live in Vietnam deeply understand about the definition, functions, ingredients, well as the standard of organic cosmetics. This article may also be a basic research in Vietnamese market for future papers which will research about others kinds of organic products or loyalty customer of organic products. Furthermore, manufacturers and managers are able to develop strategies or refine their products to suit the Vietnamese criteria.

On the other hand, organic cosmetics are strange to people living in rural and suburban areas, so this research pay more focus on collecting in two major cities of Vietnam. The researcher suggests that future studies pay more attention on citizens who live in rural and suburban areas in Vietnam. Moreover, this study is not too focused on examining the impact of price and level of trust on the repurchase intention toward organic cosmetic products. Therefore, it may also become essential elements that should be researched in the future.

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# STUDY ON FACTOR INFLUENCING CUSTOMER'S INTENTION TO USE MOBILE BANKING: A CASE STUDY OF INTENTION TO USE AMONG GENERATIONS TOWARD USING MOBILE BANKING SERVICES IN BANGKOK AREA

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## **Abstract**

This research aims to determine factors influencing intention to use mobile banking. The purposed model empirically tested 400 collected survey questionnaires. Pearson's correlation coefficient, Simple linear regression, multiple linear regression and one-way ANOVA analysis were utilized to test hypotheses. The finding revealed that perceived ease of use influences perceived usefulness and perceived ease of use and perceived usefulness impact on attitude. Moreover, perceived usefulness and attitude influence intention to use mobile banking services. There is a significant mean difference found among generations (Baby boomer, Generation X, Y, and Z) in customer's intention. Bank can use the result of this current research to further improve system, service and create marketing campaign in order to convince customers to actively use mobile banking instead of visiting branch banking.

**Keywords:** *TAM, Bangkok, Banking Service, Intention to Use, Mobile Banking, Thailand.*

## **1. Introduction**

Even though the preference of majority Thai customer for brick-and-mortar and teller transactions has been observed, the mobile banking application services provided by bank are rising rapidly along with digital platform. This is expected to become the norm in Thailand's financial services industry. The statistical data from Bank of Thailand (Aseantoday, n.d.) stated that since January 2016 until June 2017, the number of use toward using mobile banking services has increased more than 90% or 12 million users. In terms of digital banking tools, they have indicated a promising future for digital banking expansion and offered numerous chances for banks to increase revenue and number of customers and also minimize operating costs. Mobile banking services is an innovation system provided by the financial institution or bank that facilitate their transactions with the customer through mobile phone devices or tablet. In terms of customer, mobile banking services provide the benefit of convenient execution of the financial transactions including checking their account balances, transferring money and making a payment to their loan. The customers are able to perform this services anywhere and anytime in the world via smartphone or mobile devices (Dahlberg, 2008; Thakur & Srivastava, 2014). As the result of these benefits, the growth of using mobile banking service significantly increases every year. Furthermore, the Thai government has announced campaign Thailand 4.0 along with cashless society to reduce bank note. Intention to use mobile banking services is considered being one of the challenges for banking industry to accomplish. In addition, the generation has become a component factor that can influence the intention to use mobile banking services. This lead to an empirical study of the intention to use mobile banking services among generation in Bangkok area in order to investigate

answer the following question.

Q1: What are the key factor influencing intentions to use mobile banking service?

Q2: Are there any mean differences among generation in customer's intention toward using mobile banking services.

There is limited number of research found to comprehensively study a wide range of factors influencing the intention toward using mobile banking services in the era of Thailand 4.0. In order to fulfill this gap, this research study was conducted a conceptual framework to determine the factors influencing intention to use mobile banking services and also investigate the differences among generations in customer's intention toward using mobile banking services.

## **2. Literature Review and Hypothesis**

The purpose of this research study aims to examine the factors influencing customer intention towards using mobile banking services. There are two main parts consisting of theory, definitions of each variable and related literature review.

### *2.1 Perceived Ease of Use (PE)*

Ease of use is one of the parts on perceived usefulness (Agarwal & Prasad, 1999; Davis, 1989; Hu, Chau, Sheng, & Tam, 1999; Venkatesh, 2000; Venkatesh & Davis, 2000; Venkatesh & Morris, 2000). According to application of Technology Acceptance Model (TAM) in M-Banking were mentioned by Lule, Omwansa and Waema (2012) that perceived ease of use is defined as the level of a person believes that using a mobile banking system would be free effort. By using mobile banking, it does not need effort as it is developed to help users use application more easily and conveniently. Mobile banking accessible anywhere and anytime whenever customer or users need to do the transactions even transfer or investment money. Elkhani, Soltani and Nazir Ahmad (2014) revealed that the higher level of perceived ease of use of any system, the higher of perceived usefulness will be. This is supported by the research from Bhatiasevi and Yoopetch (2015); Kim (2014); Lee, Hsieh and Hsu (2011); Lee, Hsieh, and Ma (2011); Lee (2009); Ha and Stoel (2009); Ramayah and Lo (2007); Luarn and Lin (2005).

### *2.2 Perceived Usefulness (PU)*

Perceived usefulness is defined as extent that people perceive technology to help them perform the task easily (David, 1989). Previous research from Wu and Wang (2005) stated that perceived usefulness refer to individual's perception toward using innovation technology, so as to help them to improve their performance (Davis, 1989). In 2000, Venkatesh and Davis claimed that whenever customer perceived usefulness in technology, customer will have intention to use it. According to Yiu, Grant and Edgar (2007), perceived usefulness has significantly influence on behavior intention toward mobile banking in positive ways. There has been numerous research proving that perceived usefulness has influence on intention toward mobile banking (Davis, 1989, Venkatesh & Morris, 2000). A study from Bhatti (2007); Davis (1989); Kim, Chan and Gupta (2007); Pavlou (2003);

Venkatesh (2000); Venkatesh and Davis (1996); Venkatesh and Morris (2000) stated that there has a positive relationship between perceived usefulness of mobile banking services, intention and attitude toward mobile banking usage.

### *2.3 Attitude toward Mobile Banking (AT)*

Rosenberg (1956), Fishbein (1967), Wyer (1974), and Mc (1968) stated that individual's attitude means the evaluation belief about the object. An attitude can be defined as an individual's tendency to evaluate objects as positive or negative (Nathan & Eleanor, 2011). Fishbein and Ajzen (1975) stated that the individual's attitude is the faith at particular point in that time. Thus, Fishbein identify as mentioned in Authman (1986) is faith or belief is the cause of attitude, attitude is defined by the total belief and changing attitude must be due to change belief. In addition, recent research mentioned by Fishbein and Ajzen (2000) revealed that attitude is the degree of favorableness and unfavorableness of personality feeling towards a psychological object. Another studied from Asianzu and Maiga (2012) explored attitudes as a crucial factor in mediating the relationship between perceived ease of use and perceived usefulness toward intention to use. There has been many research shown the significant influence of attitude towards intention (Davis, F.D., 1989; Mathieson, 1991; Taylor & Todd, 1995; Lu, J., Yu, C.S., Liu, C. & Yao, J.E., 2003; Shih & Fang, 2004; Rhodes & Courneya, 2003; Ma'ruf, J.J., Mohamad, O. & Ramayah, T., 2003; Ramayah, T., Noor, M.N.M., Nasurdin, A.M. & Hasan, H., 2003; Teo & Pok, 2003; Ramayah, T., Noor, M.N.M., Nasurdin, A.M. & Sin, Q.B., 2004; Eri, 2004; Ramayah, T., Ling, C.Y., Norazah, M.S. & Ibrahim, M., 2005; Ing-Long & Jian-Liang, 2005; May, 2005; Ramayah, Mohd & Suki, 2006). Consequently, in this research study we hypothesize that customer's attitude towards mobile banking services significantly influence intention towards mobile banking based on literature review.

### *2.4 Intention toward Mobile Banking (IT)*

Behavior intention refers to the degree to which a person determines for an execution or not on some particularized future behavior (Warshaw & Davis, 1985). This has been concluding as an essential element of an individual's behavior forecast (Ajzen, 2002; Castaneda, Munoz-Leiva, & Luque, 2007). Online transactions require users' attitude and intention to interact with their banks even for the purpose of mobile banking. This is because TAM looks deeper into the usage of system with reliable equipment, substantial measurement methods and economical value. Therefore, the current research hypothesizes that customer's intention toward mobile banking services is influenced by customer's perceived usefulness and attitude toward mobile banking.

## **3. Conceptual Framework and Research Methodology**

The conceptual framework of this research study (Figure 1) has been developed from the TAM model by Davis (1989).

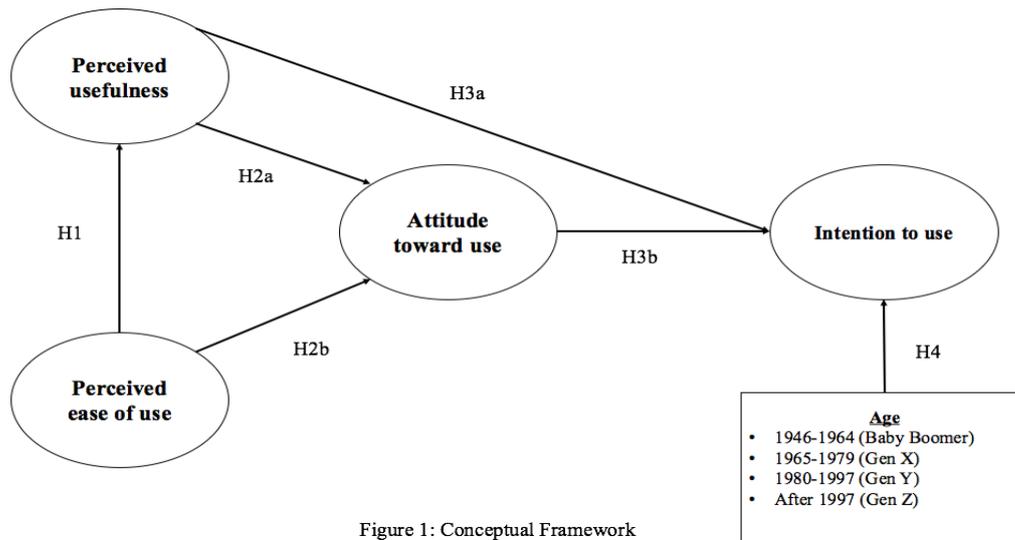


Figure 1: Conceptual Framework

Table 1: Defined Hypotheses

No.	H	Hypotheses
1	<b>H1</b>	Perceived ease of use (PE) has significantly positive influence on customer’s perceived usefulness (PU) toward using mobile banking.
2	<b>H2a</b>	Perceived usefulness (PU) has significantly positive influence on customer’s attitude (AT) toward using mobile banking.
3	<b>H2b</b>	Perceived ease of use (PE) has significantly positive influence on customer’s attitude (AT) toward using mobile banking.
4	<b>H3a</b>	Perceived usefulness (PU) has significantly positive influence on customer’s intention (IT) toward using mobile banking.
5	<b>H3b</b>	Attitude (AT) has significantly positive influence on customer’s intention (IT) toward using mobile banking.
6	<b>H4</b>	There is significant mean difference among generations in customer's intention (IT) toward using mobile banking services.

### 3.1 Research Methodology

This research was conducted by using quantitative analysis in order to determine the factors influencing usage of mobile banking services. The data were collected from target respondents who are living in Bangkok area by using non-probability as convenience sampling. Five-point Likert scale was utilized in the survey questionnaire ranging from “1” as “Strongly Disagree” to “5” as “Strongly Agree”. This research analysis applies multiple

linear regressions in order to measure the influence of independent variables.

### 3.2 Population and Sampling

The target respondents for this research are Thai who live in Bangkok area who have used mobile banking application services. The researcher determine the sample size of the target population at the confident level of 95 percent and the level of precision or sampling error is equal to 5 percent as the formula of Cochran (1997) which was at least 385 in Bangkokian context. The questionnaire was distributed in online channels to 400 respondents (25% of Baby Boomer, Gen X, Gen Y and Gen Z each) who live in Bangkok area. The target population was identified by screening questions in order to filter people living in Bangkok having used mobile banking services only. In order to collect data, the online questionnaire was distributed by sending a link of survey to individuals on mobile phone's contact list as convenience sampling, and also using social network to spread the questionnaire to respondents. Convenience sampling technique is a type of non-probability sampling which facilitate the researcher to collect the questionnaire easily. Convenience sampling is the fastest technique for data collection which can be conducted within a limited period. In this current research, convenience sampling was employed to distribute the questionnaire online using Line message and Facebook. Quota sampling technique is a type of non-probability sampling methods that researcher must carefully control the questionnaire's respondents by specific number per quota (here, 'generation').

Table 2: Consistency of the scales test (N=30)

<b>Variables</b>	<b>Number of items</b>	<b>Cronbach's Alpha</b>
Perceived ease of use	5	0.682
Perceived usefulness	5	0.891
Attitude	4	0.759
Intentions to use	5	0.872

The reliability of questionnaires has been pre-tested with 30 respondents and analyzed by using Cronbach's Alpha Coefficient. Cronbach's Alpha Coefficient was considered to explore the reliability level of each variable. According to Table 2, the test result show that all variables surpass the standard requirement of Cronbach's Alpha Value to be greater than 0.6 (Cronbach, 1951). Consequently, this questionnaire can be employed as a part of research instrument.

## 4. Result and Discussion

### 4.1 Data Analysis

Multiple Linear Regression (MLR), Simple Linear Regression (SLR) and One-Way Anova were utilized to test proposed hypotheses. MLR and SLR are used to determine the influence, relationship and difference between independent variable and dependent variable defined in

the conceptual framework. Furthermore, One-Way Anova was applied to explore the mean difference among generations toward intention to use mobile banking services. Descriptive analysis was conducted to summarize data in a meaningful way that allows simpler interpretation of the data.

#### 4.2 Descriptive Analysis

The demographic profile on all 400 respondents who completed the questionnaires was summarized in Table 3. The gender proportion of respondents who participated in the research survey was 43.5% of male and 56.5% of female. The age of respondents was divided in the same proportions by using quota sampling technique. The majority of respondents was bachelor degree holder with 83.5% followed by master degree or higher (11.5%) and the diploma or below with (5%). Additionally, over a half of respondents were employee (43%) followed by student (22.8%), self-employed (19%), other such as retired, nurse, freelance and housewife (13.2%) and the rest from Government Official / State Enterprise Employees (2%). Generally, the respondents had income in the range from THB 10,001 to 30,000 (41%). In addition, the respondents use mobile banking services at average 3-4 times per week (43.5%) followed by less than 1 times per month (25%), everyday (16.3%) and 1-2 times per month. Mainly, proportion of visit branch banking are once per month (26.3%) followed by a few times per month (23.7%). Mostly, the reason for using mobile banking services is money transfer to facility (53%). Majority of respondents answer other with 75% (none, n/a and nothing) in the questionnaire asking the reason or not using mobile banking services followed by complicated to use (16%), don't think mobile banking service are secure (5.8%) and not aware about the service (3.3%). According to the result from respondents, the most preferred using mobile banking services are Kasikorn bank (38.3%) followed by Siam commercial bank (20%).

Table 3: Demographic Profile and Consumer Behavior Information (400 respondents)

<b>Demographic</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Male	174	43.5
Female	226	56.5
<b>Age</b>		
1946-1964 (Baby Boomer)	100	25
1965-1979 (Gen X)	100	25
1980-1997 (Gen Y)	100	25
After 1997 (Gen Z)	100	25
<b>Status</b>		

Single	283	70.8
Married	116	29.0
Other	1	0.2
Education		
Diploma or Below	20	5
Bachelor Degree	334	83.5
Master Degree or Higher	46	11.5
Occupation		
Student	91	22.8
Government Official / State Enterprise Employees	8	2
Employee	172	43
Self-Employed	76	19
Other	53	13.2
Income		
Less than or equal to THB 10,000	4	1
THB 10,001-30,000	164	41
THB 30,001-50,000	108	27
Above THB 50,001	124	31
Consumer Behavior Information		
How often are you using mobile banking services		
3-4 times per week	174	43.5
1-2 times per month	61	15.2
Less than 1 times per month	100	25
Everyday	65	16.3
How often are you visit branch banking		
Once a year or less	27	6.8

A few times/ year	63	15.7
Once/ month	105	26.3
A few times/ month	95	23.7
At least once/week	79	19.7
Multiple times/week	31	7.8
What is your reason for using mobile banking services		
Services are safe	17	4.2
Mobile Banking are providing anywhere bill payment options	69	17.3
Mobile Banking money transfer facility	212	53
Other	102	25.5
What is your reason why you not prefer to use mobile banking services		
Not aware about the services	13	3.3
Don't think mobile banking service are secure	23	5.8
Complicated to use	64	16
Other	300	75
Which bank are you preferred to use mobile banking services		
Siam Commercial Bank	80	20
Kasikorn Bank	153	38.3
Bank of Ayudhya	5	1.3
Bangkok Bank	77	19.3
TMB Bank	18	4.5
Krungthai Bang	39	9.8
Other	28	7

Regarding to Pearson's Correlation Matrix for hypotheses in Table 1 (H1-H3b) as exhibited in Table 4, all variables have positive correlations among each other with P-value less than 0.05. According to the strength of correlations defined by The Political Science Department at Quinnipiac University, the overall variables having a greater than 0.4 can be implied as strong positive relationship. There are two pairs in the matrix showed the strong relationship

which are Intention to use (IT) with Perceived ease of use (PE) at 0.537 correlation and Attitude (AT) with Perceived usefulness (PU) with 0.477 correlation.

Table 4: Pearson's Correlation Matrix for Hypothesis (N=400)

Variable	Mean	SD	1	2	3	4
<b>PE</b>	2.8050	0.84958	1			
<b>PU</b>	2.9435	0.81938	0.424*	1		
<b>AT</b>	2.4813	0.82049	0.475*	0.477*	1	
<b>IT</b>	2.9645	0.84346	0.537*	0.417*	0.474*	1

Note: \* represents the correlation which is significant at 0.05 level (1-tailed).

#### 4.3 Inferential Analysis and Multicollinearity Validation

Table 5: Simple Linear Regression Result (H1), Dependent Variable: Perceived Usefulness (PU)

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
<b>H1</b>	Perceived Ease of Use	0.424*	1	Supported
<b>R Square</b>		0.179		
<b>Adjusted R Square</b>		0.177		

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$ .

The result exhibited in the Table 5 indicates  $R^2$  at 0.179 showing that independent variable (Perceived Ease of Use) could predict the dependent variable (Perceived Usefulness) around 17.9% at the significant level of 0.05 or the 95% of confidence level. The P-value of the independent variable (PE) are less than 0.05 indicate that H1 are supported because of P-value greater than 0.05. According to the result, Perceived Ease of Use has statistically significant positive influence on Perceived Usefulness (PU) at the Standardized Coefficient ( $\beta$ ) 0.424.

Table 6: Multiple Linear Regression Result (H2a - H2b), Dependent Variable: Attitude (AT)

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
H2a	Perceived Usefulness	0.337*	1.219	Supported
H2b	Perceived Ease of Use	0.332*	1.219	Supported
<b>R Square</b>		0.318		
<b>Adjusted R Square</b>		0.315		

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$ .

The result of descriptive analysis represent that  $R^2$  at 0.318 showing that independent variables (Perceived Usefulness and Perceived Ease of Use) could predict the dependent variable (Attitude) about 31.8% at the significant level of 0.05 or the 95% of confidence level. The P-value less than 0.05 proved that hypotheses namely H2a and H2b are supported. Furthermore, Perceived Usefulness is the strongest influencer on attitude with Standardized Coefficient ( $\beta$ ) at 0.337. The variance inflation factors (VIFs) were utilized to examine the multicollinearity problem. VIFs were less than 5.00 indicating no critical violation for multicollinearity problem in this study.

Table 7: Multiple Linear Regression Result (H3a – H3b), Dependent Variable: Intention (IT)

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
H3a	Perceived Usefulness	0.247	1.295	Supported
H3b	Attitude	0.356	1.295	Supported
<b>R Square</b>		0.272		
<b>Adjusted R Square</b>		0.268		

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.0$ .

The result in Table 7 illustrates that  $R^2$  at 0.272 showing that independent variable (Perceived Usefulness and Attitude) could predict the dependent variable (Intention) about 27.2% at the significant level of 0.05 or the 95% of confidence level. The P-value less than 0.05 proved that hypotheses namely H3a and H3b are supported. Furthermore, attitude is the strongest influencer on intention with Standardized Coefficient ( $\beta$ ) at 0.356. The variance inflation factors (VIFs) were utilized to examine the multicollinearity problem. VIFs were less than 5.00 indicating no critical violation for multicollinearity problem in this study.

Table 8: One-Way ANOVA result (H4), Dependent Variable: Intention (IT)

<b>One-Way ANOVA</b>					
<b>INTENTION (IT)</b>					
	Sum of Square	Df	Mean Square	F	Sig
<b>Between Groups</b>	146.540	3	48.847	140.868	0.00
<b>Within Groups</b>	137.316	396	0.347		
<b>Total</b>	283.856	399			

An analysis of variance exhibited in the Table 8 indicated that mean difference among generations on Intention (IT) to use mobile banking services is significant,  $F(3, 396) = 140.868, P = 0.00$

Table 9: Scheffe's Post hoc Test (Multiple Comparisons)

<b>Generation (I)</b>	<b>Generation (J)</b>	<b>Mean Difference (I-J)</b>
<b>Baby Boomer</b>	Generation X	-1.000*
	Generation Y	-1.520*
	Generation Z	-1.442*
<b>Generation X</b>	Baby Boomer	1.000*
	Generation Y	-0.520*
	Generation Z	-0.442*
<b>Generation Y</b>	Baby Boomer	1.520*
	Generation X	0.520*
	Generation Z	0.078
<b>Generation Z</b>	Baby Boomer	1.442*
	Generation X	0.442*
	Generation Y	-0.780

Note: \* represent the mean difference is significant at the 0.05 level with  $P\text{-value} \leq 0.05$ .

The result of Scheffe's Post hoc Test exhibited in the Table 9 indicated that there are statically differences in mean scores of Customer's Intention (IT) toward using mobile banking services among generations i.e Baby boomer, generation x, generation y and

generation z at 95% of confidence level. Consequently, H4 is supported, proving the difference among generations in customer's intention toward using mobile banking services. Therefore, the practical way to approach in each group of customer should be considered differently when banking institution execute marketing campaigns.

## **5. Conclusion and Recommendations**

This empirical study was conducted to determine the factor influencing customer's intention toward using mobile banking services in digital platform era of Thailand 4.0. This study was conducted in a right time given that Thai Banking industry launched campaign cashless by using mobile banking services to execute all transaction since 2016 and also Thai government launched the national e-payment system or prompt pay services since 2016. This research study went further examining mean differences among generations in customer's intention from 400 respondents in Bangkok area. The result was obtained by using inferential statistical analyses including Pearson's Correlation, Simple Linear Regression, Multiple Linear Regression and One-Way ANOVA. 400 respondents were qualified to be the population samples in this research study. The relationship among all variables was explored by Pearson's Correlation analysis. Intention to use mobile banking services turned out to have strong relationship with perceived usefulness and attitude. One of the research objectives was to examine the factor influencing on customer's intention toward using mobile banking services among different generations. In order to achieve the objective, the six hypotheses were examined with 400 respondents living in Bangkok area. The hypotheses are investigated by using statistical application (SLR, MLR and One-Way ANOVA). As a result, finding can be concluded that six hypotheses are supported which are H1, H2a, H2b, H3a, H3b and H4. Perceived ease of use was found to positively influence on perceived usefulness and the finding was consistent with studies from Bhatiasevi and Yoopetch (2015), Kim (2014), Lee (2009), Ha and Stoel (2009), Luarn and Lin (2005). Similarly, perceived usefulness and perceived ease of use turned out to have positively influence on attitude supporting previous research (Holden & Karsh, 2010; Legris, Ingham & Collerette, 2003; Taylor & Todd, 1995; Teo, 2011). Both perceived ease of use and attitude have positively influence on intention (Chung & Kwon, 2009; Van der Haiden, Verhagen & Creemers, 2003; Lee Xion & Hu, 2012; Lin, 2011; Mathieson, 1991; Moon & Kim, 2001). There have some previous research studies on mobile banking by Akturan and Tezcan (2012), Lin (2011). It interprets that "Ease of use and Usefulness" is the key component of designing mobile banking application. Thus, application developer should prioritize in ease of use and usefulness when creating applications. The finding of the current study confirmed previous research in that ease of use and usefulness lead to improved attitude. In addition, attitude was the strongest influencer on customer's intention. This implies that in Thailand 4.0 under digital era platform, customer's intention toward using mobile banking services are relying on perceived usefulness and attitude. This result implies that if the users perceived this application as useful and also have positive attitude then they are more willing to use mobile banking services continually. The result of One-Way ANOVA analysis indicated the different generations consisting of baby boomer, generation x, generation y and generation z have different levels of customer's intention toward mobile banking services use. However, as for generation y and z there had no statistical mean difference in customer's intention toward mobile banking services. To summarize, if banks would like to increase the amount of mobile banking user, they have to launch marketing campaign to match in each generation.

A practical implication in these results is that banks need to build customer's attitude in positive way and also prioritize in mobile banking services application along with perceived ease of use and with perceived usefulness lead to increase customer's intention toward using mobile banking services. In order to increase usage amount among baby boomer's generation and generation X, the bank may consider building a resource center on their website. Because one of the main barrier to create intention toward using mobile banking services found in the current study was the customer's confidence level in using mobile banking services. A simple way to solve this barrier can be providing the product simulation on bank's website and providing bank's staff to educate the customer on how to use this kind of services. Furthermore, the benefit of cashless society can generate a great outcome such decreasing cash management expense. By using mobile banking service, bank service provider can utilize the customer spending habits information in order to create new campaign.

## 6. Limitations and Further Research

All studies have limitation. In this particular research study, one of the limitations is fact that all of respondents are Bangkokian and conveniently sampled. Therefore, it may decrease generalizability of findings of this current study. Thus, it is suggested that future researchers utilize stratified samplings representing sub-group of the target population for robust external validity (generalizability) in Bangkok or Thailand. In addition, comparative studies between countries would be interesting and informative to make a comparison on factors influencing customer's intention to use mobile banking services. To further of this research, researchers consider adding more variables such as trust, given that people probably use this kind of mobile banking service if they trust in bank service and government's role in implementation support toward mobile banking.

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# THE EFFICIENCY OF HUMAN CAPITAL MANAGEMENT FOR A FAST-PACED ECONOMIES AND BUSINESS TRANSFORMATION

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## **Abstract**

This paper explores the impact of Human capital or people assets on the economy and individual earnings. Indeed, human capital has a strong relationship to both economic growth and productivity. Education attainment is considered a major impetus for strengthening human capital, and therefore, education becomes an investment rather than an expense if conducted in a timely manner. A workforce with a tertiary degree has a far greater advantage when getting employed and stretching its earning schemes longer than does the same with only a primary education. Still further, education level can affect the life expectancy and mortality rate of that human capital especially so for men than for women. Human capital will guide the economy through the turbulent times and stabilize long-term growth and success.

**Keywords:** *Human Capital, Education Attainment, Fast-Paced Economies, Business Transformation*

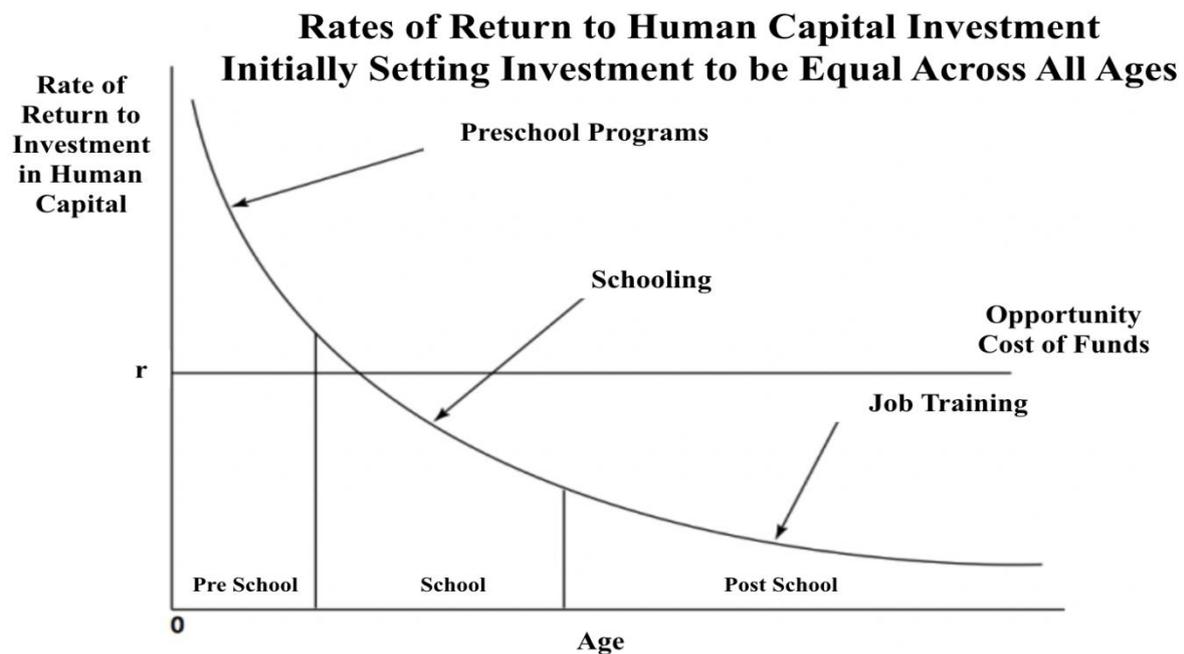
## **1. Introduction**

The idea that humans are a form of sound capital was first invented by the economist, Theodore Schultz, in the 1960s to reflect the value of human capacities that can be invested in using both education and training. Schultz (1960) believed human capital could lead to an improvement in both quality and productivity, as human capital has a strong relationship to an economic growth that can then be measured by how much investment is made into people's education.

“I propose to treat education as an investment in man and to treat its consequences as a form of capital. Since education becomes a part of the person receiving it, I shall refer to it as human capital. It is a form of capital if it renders a productive service of value to the economy. The principal hypothesis underlying this treatment of education is that some important increases in national income are a consequence of additions to the stock of this form of capital” (Schultz, 1960, p. 571)

In economic terms, human capital is a quantification of actual economic value for employers and for the economy, which can be recognized by investing in it. Like any other types of assets, human capital is also subjected to depreciation as is the case with unemployment and the inability to maintain skills with innovation as aligned with what Benjamin Franklin once stated "An investment in knowledge pays the best interest." (Franklin, B, *The Way to Wealth*, as cited in *Money Mastery*, Nov 10, 2016, para. 1). However, there is a certain caution as well as in that late investments do not successfully pay off. (Heckman & Carneiro, 2003). Illustration 1 demonstrates that late learning especially learning closer to retirement simply costs money and foregone earnings, while generating but moderate wages and less of an impact on the economy in terms of human capital.

*Illustration 1: Return to Human Capital Investment in Various Ages*



Source: Heckman & Carneiro (2003, p. 93)

To further study the issue, this research paper examines the following three topics:

- Impact of human capital on world economies and earnings
- Effect of education on human capital development
- Efficiency of Thailand's Human Capital Management on a global scale

## **2. Impact of Human Capital on World Economies and Earnings**

Gary Becker, a 1992 Nobel Prize Laureate in Economic Sciences and a pioneer in the study of human capital, described human capital as education, training, and medical treatment as an effective means of production. Becker (1994) suggests that "schooling raises earnings and productivity mainly by providing knowledge, skills, and a way of analyzing problems." (p. 19) According to Becker (1975), expenditures on education, training, and medical care, are regarded as investments in human capital wherein people cannot be separated from their knowledge, skills, health, or values in the way other forms of assets, such as financial and physical, can be separated. Increased human capital is essential for differentiating the income of graduates and influences the rates of economic growth. Becker further pointed out the important fact that new technological advances are of little value to countries with very few skilled workers and economic growth indeed closely depends on new knowledge as well as human capital.

"The outstanding economic records of Japan, Taiwan, and other Asian economies in recent decades dramatically illustrate the importance of human capital to growth. Lacking natural resources -- e.g. they import practically all their sources of energy -- and facing discrimination from the West, these so-called Asian Tigers grew rapidly by relying on a well-trained, educated, hard-working, and conscientious labor force. It surely is no accident, for example, that Japan's systems of lifetime employment at large companies originated after

World War II when they began to upgrade their technology rapidly partly by investing heavily in the training of employees. That makes excellent use of modern technologies. China, for example, is progressing rapidly by mainly relying on its abundant, hardworking, an ambitious population." (Becker, 1975)

### *2.1 Human Capital Defined*

According to the Organization for Economic Cooperation and Development (OECD, 2007), human capital is "the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being." (p.29) Further, a good supply of well-educated workers can help an economy grow, while its absences can cause economic stagnation.

According to Pettinger (2017), at the individual level, human capital is the skills and abilities of individual workers. At an economic level, this aggregate human capital is determined by national education standards. The followings are the factors that help determine the definition of human capital:

- Skills and qualifications
- Education levels
- Work experience
- Social skills -- communication
- Intelligence
- Emotional intelligence
- Judgement
- Personality -- hard working, harmonious in an office
- Habits and personality traits
- Creativity -- ability to innovate new working practices/products
- Fame and brand image of an individual, e.g. celebrities paid to endorse a product
- Geography -- social peer pressure of local environment can affect expectations and attitudes.

Pettinger (2017) noted that there are four ways to increase human capital. First is the specialization and division of labour, which allows workers to concentrate on specific tasks while increasing their skill specializations. Second is the improvement of literacy and numeracy through an effective education system that enables creativity rather than only rote memory. Third is the increase of direct vocational training skills that emphasize skilled professional fields, such as mechanical, electrical, construction and health care. Fourth is the enhancement of infrastructure and self-employment that enables greater use of human capital. Good transportation, digital communication, and IoT (the Internet of Things that include a network of physical devices, vehicles, home appliances, and other items embedded with electronics and software) are considered important for effective human capital management in developing economies.

The economic benefits of human capital can be viewed on an individual and a national level. The economic benefits of human capital at the individual level is viewed by increased earnings against the cost of acquiring that capital, including the expensive schooling and university fees as well as money they not being earned during study years. The results of higher education end up as higher rates of employment than do the results for those who only complete secondary school. Higher earnings also suggest higher productivity, which in turn fuels economic growth.

## 2.2 Human Capital, Cost, and Earnings

Education costs money, but then so does ignorance.

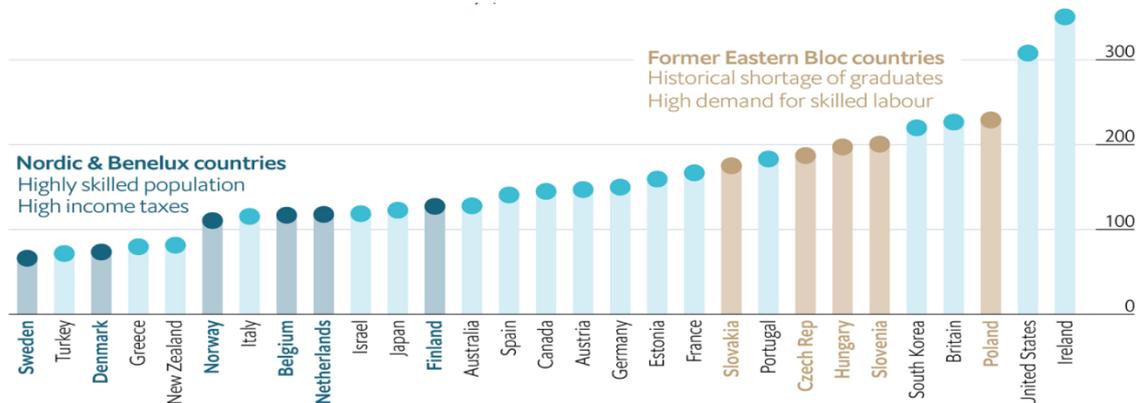
Sir Claus Moser

(Cited in Coaching Confidence, 20 October 2013)

As higher education does seem to be costly, the OECD data show that graduates can expect far greater lifetime earnings than can those without a degree. The lifetime benefit of getting a degree is the greatest in Ireland (Tozer, J, December/January 2017). In terms of subject of study, Medicine and Dentistry top the list as the highest earning fields, while art and design scores the lowest. (See Illustration 2 and 3)

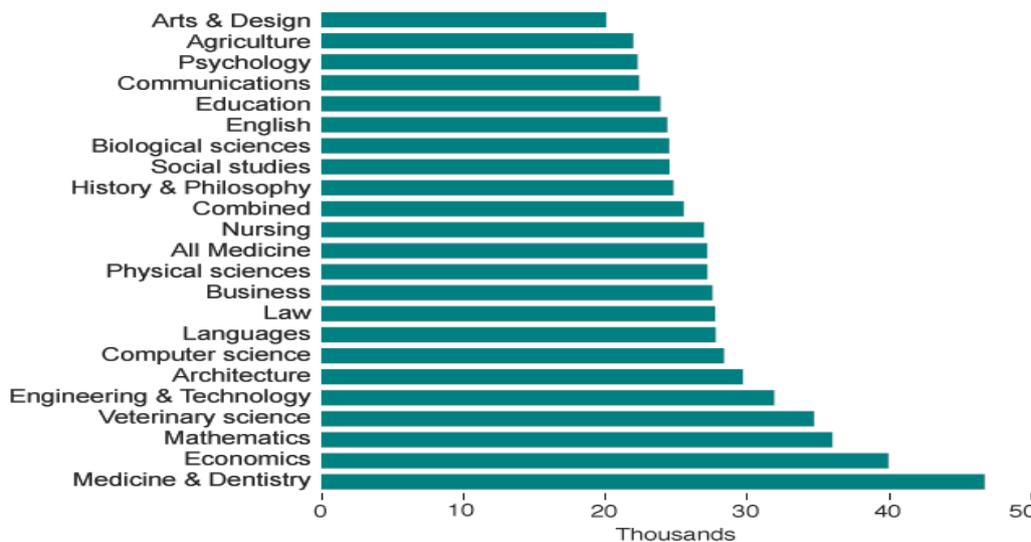
### **Illustration 2: Lifetime Net Benefit of Getting a Degree (Compared with Non-Graduates, \$000 at Purchasing Power Parity\***

(PPP is an economic theory that compares different countries' currencies through a "basket of goods" approach)



Source: Tozer, J (December/January 2017, para 2)

### **Illustration 3: Median annual earning by Subject Area, Five years after Graduating**



Source: Britton, J. (2017, para 12)

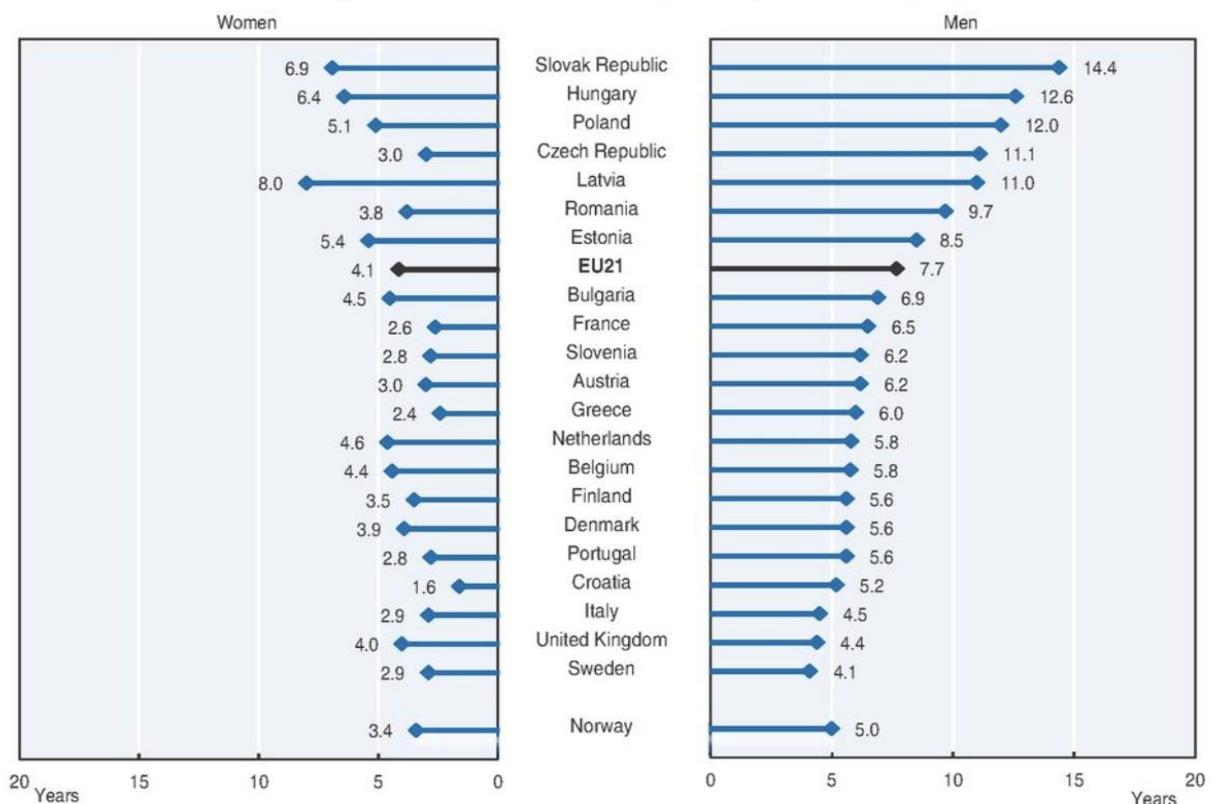
When considering who is most likely to participate in tertiary education, young men are less likely than women are to earn a tertiary degree (50% women and 38% men). However, tertiary educated women earn 26% less than do tertiary-educated men. The employment rate of workforce age between 25 and 64 years with a tertiary degree is 81% for women, 89% for men, and 78% for foreign-born individuals. The employment rate of those who leave school before completing upper secondary school, however, drops to 47% for women, 68% for men, and 60% for foreign-born individuals. Interestingly, education has a significant impact on earning power especially for women. A study by the Global Partnership for Education found that one additional school year can increase a woman's earning by up to 20%. (Education at a Glance 2018, OECD Indicators, 2018)

### 3. Effect of Education on Human Capital Development

In addition to earnings, education can have a significant impact on human capital far beyond one would expect. On average, OECD (2017) reports the gap in life expectancy between high and low-educated people are 8 years for men and 5 years for women at age 25 years, and 3.5 years for men and 2.5 years for women at age 65.

Inequalities in life expectancy by education level are generally larger among men than they are among women. (See Illustration 4 and 5). For instance, on average across EU countries, 30-year-old men with less than an upper secondary education can expect to live about 7.7 fewer years than those with a tertiary education (a university degree or the equivalent), that figure falls to 4.1 years in the 30-year-old women group. The gap in mortality rate for low-educated men (25-64 years) is higher than those with higher education -- indeed an almost four-fold difference. A substantial part of the education gap in mortality is due to a higher smoking rates and excessive alcohol consumption among people with a lower level of education.

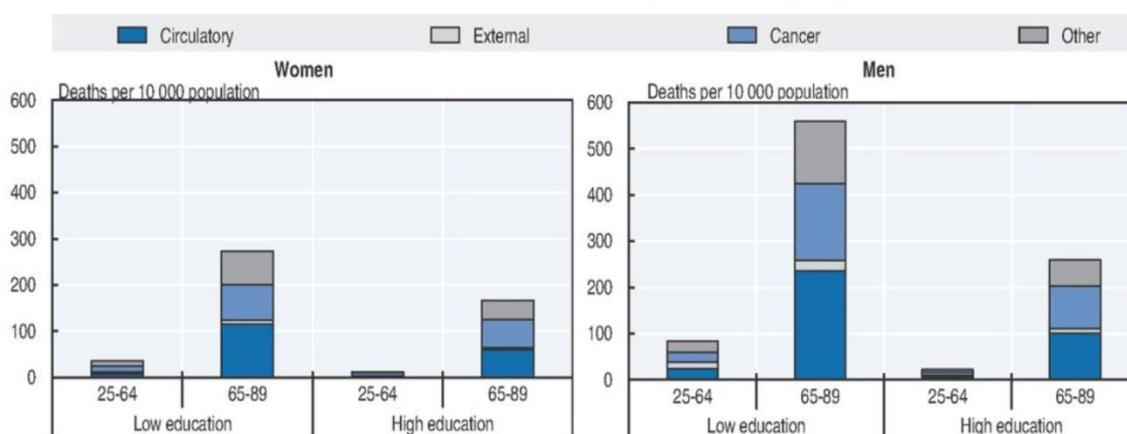
**Illustration 4: Gap in Life Expectancy at Age 30 between People with the Lowest and highest Level of Education, 2016 (or Nearest Year)**



Note: Data refer to 2012 for France and Austria and to 2011 for Latvia, Belgium and the United Kingdom (England). EU average is unweighted.

Source: Health at a Glance: Europe 2018, OECD, 2018 (p. 87)

**Illustration 5: Mortality Rates by Education Level and Causes, 10 European Countries, 2011 (or Nearest Year)**



Note: Countries covered are Belgium, the Czech Republic, Denmark, Finland, Hungary, Latvia, Norway, Poland, Slovenia and the United Kingdom (England).

Source: Health at a Glance: Europe 2018, OECD, 2018 (p. 87)

#### 4. Efficiency of Thailand's Human Capital Management on a Global Scale

According to the *World Economic Forum Insight Report* (2017), how countries develop their human capital can be a more significant determinant of their long-term success than virtually any other factor. The World Economic Forum defines human capital as "the knowledge and skills people possess that enable them to create value in the global economic system." (p. 4)

There are four thematic dimensions of Global Human Capital Index (2017) that are used to assess a country's human capital:

1. Capacity: Level of formal education of younger and older generations as a result of past education investment
2. Deployment: Formal education of the next-generation workforce and continued upskilling and re-skilling of the current workforce
3. Development: Skills application and accumulation among the adult population
4. Know-how: Breadth and depth of specialized skills currently used at work

Table 1: Details structure of the Global Human Capital Index is shown in the followings:

Component (Sub index weighting)	INDICATOR	AGE GROUP
1. Capacity (25% of total index score)	<ul style="list-style-type: none"> <li>• Literacy and numeracy</li> <li>• Primary education attainment rate</li> <li>• Secondary education attainment rate</li> <li>• Tertiary education attainment rate</li> </ul>	1. 0 - 14 years

<b>2. Deployment</b> (25% of total index score)	<ul style="list-style-type: none"> <li>• Labour force participation rate</li> <li>• Employment gender gap</li> <li>• Unemployment rate</li> <li>• Underemployment rate</li> </ul>	2. 15 - 24 years 3. 24 - 54 years 4. 55 - 64 years 5. 65 + years
<b>3. Development</b> (25% of total index score)	<ul style="list-style-type: none"> <li>• Primary education enrollment rate</li> <li>• Quality of primary schools</li> <li>• Secondary education enrolment rate</li> <li>• Secondary enrolment gender gap</li> <li>• Vocational education enrolment rate</li> <li>• Tertiary education enrolment rate</li> <li>• Skills diversity of graduates</li> <li>• Quality of education system</li> <li>• Extent of staff training</li> </ul>	
<b>4. Know-how</b> (25% of total index score)	<ul style="list-style-type: none"> <li>• High-skilled employment share</li> <li>• Medium-skilled employment share</li> <li>• Economic complexity</li> <li>• Availability of skilled employees</li> </ul>	

The *Global Human Capital Index 2017* ranks 130 countries on how well they are developing their human capital based on these same four elements. The results are shown in the Table 1 below.

Table 2: Global Human Capital Index 2017, Detailed Rankings

Country	OVERALL INDEX		CAPACITY SUBINDEX		DEPLOYMENT SUBINDEX		DEVELOPMENT SUBINDEX		KNOW-HOW SUBINDEX	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Norway	77.12	1	80.46	13	73.18	24	82.63	6	72.22	6
Finland	77.07	2	81.05	8	65.09	68	88.51	1	73.62	2
Switzerland	76.48	3	76.36	28	69.12	42	84.87	2	75.57	1
United States	74.84	4	78.18	22	68.72	43	83.45	4	68.99	13
Denmark	74.40	5	79.37	16	71.41	34	78.65	14	68.18	17
Germany	74.30	6	76.33	29	69.52	40	79.38	12	71.96	7
New Zealand	74.14	7	78.92	18	72.76	27	80.38	8	64.50	22
Sweden	73.95	8	76.21	31	69.60	39	77.10	16	72.89	3
Slovenia	73.33	9	81.10	7	65.90	64	79.21	13	67.10	18
Austria	73.29	10	73.71	45	68.00	44	81.53	7	69.92	11
Singapore	73.28	11	76.45	27	70.52	36	73.62	25	72.52	4
Estonia	73.13	12	80.94	10	72.70	28	76.20	18	62.68	26
Netherlands	73.07	13	74.09	43	65.37	67	83.60	3	69.22	12
Canada	73.06	14	80.38	15	71.96	32	74.06	22	65.85	20
Belgium	72.46	15	75.14	35	63.39	75	82.84	5	68.47	16
Russian Federation	72.16	16	83.19	4	74.33	18	72.97	33	58.14	42
Japan	72.05	17	80.96	9	66.32	62	73.92	23	67.00	19
Israel	71.75	18	70.70	58	70.56	35	74.69	21	71.03	8
Ireland	71.67	19	75.47	34	62.33	78	80.04	10	68.84	15
Australia	71.56	20	78.44	20	66.20	63	80.24	9	61.36	29
Iceland	71.44	21	58.39	96	75.55	14	79.50	11	72.33	5
Czech Republic	71.41	22	69.20	67	73.74	22	78.13	15	64.58	21
United Kingdom	71.31	23	71.59	54	67.40	51	76.23	17	70.02	10
Ukraine	71.27	24	81.70	5	72.65	31	71.47	38	59.26	38
Lithuania	70.81	25	80.42	14	70.28	37	73.05	31	59.50	37



## COUNTRY SCORE CARD

	0-14 age group			15-24 age group			25-54 age group			55-64 age group			65+ age group		
% of population	17.7			14.0			45.3			12.1			11.0		
<b>Capacity</b>	score <b>65.6</b> rank <b>77</b>														
Literacy and numeracy	value	score	rank	value	score	rank	value	score	rank	value	score	rank	value	score	rank
Primary education attainment rate				98.6	98.6	71	98.0	98.0	35	92.9	92.9	36	78.9	78.9	44
Secondary education attainment rate				99.3	99.3	60	95.8	95.8	73	90.8	90.8	67	80.3	80.3	64
Tertiary education attainment rate				75.7	75.7	61	51.9	51.9	83	23.2	23.2	100	12.0	12.0	104
							20.5	20.5	45	10.5	10.5	69	4.6	4.6	84
<b>Deployment</b>	score <b>81.0</b> rank <b>7</b>														
Labour force participation rate				45.4	45.4	62	88.6	88.6	31	71.3	71.3	34	27.8	27.8	47
Employment gender gap				0.69	68.8	89	0.85	85.3	54	0.72	72.1	50	0.50	50.1	64
Unemployment rate				3.1	69.3	6	0.5	91.3	3	0.1	97.9	3	0.0	99.1	6
Underemployment rate				1.5	86.5	7	1.0	85.1	6	0.7	88.1	6	0.4	93.0	6
<b>Development</b>	score <b>63.7</b> rank <b>66</b>														
Primary education enrolment rate	90.8	90.8	98												
Quality of primary schools <sup>1</sup>	3.5	40.9	81												
Secondary education enrolment rate	80.4	80.4	73												
Secondary enrolment gender gap	1.0	99.4	93												
Vocational education enrolment rate				19.8	19.8	69									
Tertiary education enrolment rate				48.9	48.9	54									
Skill diversity of graduates <sup>2</sup>				0.13	95.3	8									
Quality of education system <sup>1</sup>				3.7	45.5	62									
Extent of staff training <sup>1</sup>										4.1	52.2	52			
<b>Know-how</b>	score <b>54.3</b> rank <b>51</b>														
High-skilled employment share							14.0	14.0	93						
Medium-skilled employment share							90.0	90.0	59						
Economic complexity <sup>3</sup>							0.94	65.7	25						
Availability of skilled employees <sup>1</sup>							3.9	47.7	83						

Source: World Economic Forum, Global Human Capital Report (2017, p. 174)

## 5. Conclusion

Although Thailand's human capital looks good on the global scale, quality education is still a pressing issue for the government. It should and always will be a top national agenda. Amidst the disruptive technological challenges and business transformation that are becoming the pressing factors of survival, the most competitive countries in the future will be those that successfully manage their human capital as key sources of their advantage. Focusing on human capital will not only guide the economy through the turbulent times, but also stabilize each nation's position for long-term growth and success.

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# FACTORS AFFECTING VOLUNTARY TURNOVER INTENTION OF WHITE-COLLAR EMPLOYEES IN HO CHI MINH CITY, VIETNAM: 8 FORCES FRAMEWORK APPROACH

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## **Abstract**

This research aims to study reasons why white-collar workers within services and trading sector decide to stay or leave their organizations. Voluntary turnover has never fallen out of top considerable issues about business and human resources, especially in Ho Chi Minh City, one of the most important economic central-point areas of developing nation named Vietnam. As trading and services occupy a major portion of Vietnam 's economic wealth and development, understanding employees' inner values, behaviors and assessment toward their turnover intention helps employers have appropriate policy improving human resources management performance. A framework of the 8 forces of attachment and withdrawal (Maertz & Griffeth, 2004) is applied for researching distinct motives comprehensively.

**Keywords:** *Human Sources, Voluntary Turnover Intention, 8 Forces Framework, White-Collar Employee, Services, Trading.*

## **1. Introduction**

Frederick Herzberg had been reaching the employees' sources of motivation from 1950s to 1960s and he did find that there were counterintuitive forces behind motivation which could be categorized as extrinsic incentives and intrinsic rewards. He claimed that by understanding these key motivations, companies will not get stuck in recharging their human resources due to voluntary turnover and can make it possible to create a motivated workforce within employees. Although loads of researches have been studying about voluntary turnover giving several practical suggestions on employees' turnover rate control, there are numerous of organizations suffering from high voluntary turnover rate.

LinkedIn's data on half-a-billion professionals in 2017 concluded that worldwide turnover rate of 10.9%. Besides, the sectors seeing the most talent turnover: tech (software), retail, and media. According to the survey on labor market at Ho Chi Minh City studied by The Center of Forecasting on labor market information in 2017, the rational turnover rate of a company theatrically fluctuated around 4-6%, majority of companies at Ho Chi Minh reported their numbers were from 10% and above, some firms were evenly suffering a higher rate of 20%, 30%. During 2013-2017 periods, the labor turnover phenomenon occurred mainly in agriculture, industry, and service stated Ministry of Labor and Social Affair. In addition, Manpower Group – Global Human Resources Provider claimed that there were 40% within 42.000 researched companies reported that they suffered from turnover and recruitment, which was the highest level over the last 10 years.

Regarding to employee age, a survey conducted at the end of 2017 by the Alpha Human Resource Consultancy Center among with 1,000 employees working at 48 companies in HCMC aged 25-40, 67% said that they would changing job when there was opportunity; 56% said they had been working for less than 1 year. There is no doubt that the main labor resource in HCMC, generation Y, recently prefers changing jobs.

Furthermore, services occupied nearly 50% for Vietnam economy growth in 2016. Services sector contributed 41.32% for Vietnam GDP in 2017, the highest index compared with the remaining sectors.

From the problem statements above, this research studies white-collar workers, who work by mental ability in offices rather than work that needs physical effort, to answer following questions:

*Research question 1:* Which factors affect employees' intention of turnover?

*Research question 2:* To what extent does work satisfaction affect affective forces, calculative forces, alternative forces, behavioral forces, and constituent forces?

*Research question 3:* To what extent does pay satisfaction affect affective forces, calculative forces, alternative forces, and behavioral forces?

*Research question 4:* To what extent do 8 forces affect voluntary turnover intention?

*Research question 5:* What can be concluded and applied from the data collected?

## **2. Literature Review**

Employee turnover was one of the most durable topics during 20th century as there were over 1,000 academic studies written about this. And over the last 50 years, researchers have pointed out variables that affect turnover (Griffeth, Hom, & Gaertner, 2000; Peter W Hom, Caranikas-Walker, Prussia, & Griffeth, 1992; Meyer, Allen, & Smith, 1993). Though, available frameworks only focused on the organization commitment or motivations for leaving, but not comprehensively predictive model applied.

Based on the early theory of motivation stating that motives initiated behavior of turnover (Kanfer, 1990); antecedent concepts researched following organizational commitment theory whereas a three-component including affective commitment, continuance commitment normative commitment (Meyer & Allen, 1991) was used to measure employee 's attachment or calculative, attitudinal and multidimensional approach was taken into account for studying organizational commitment (Cohen & Aaron, 2014). In addition, five-tier of human needs expressed through basic needs (physiological and safety), psychological needs (belongingness and love, esteem), and self-fulfillment needs (self-actualization) from bottom upwards of Abraham Maslow hierarchy was also concerned to study on employees commitment and intention of turnover (P.W. Hom & Griffeth, 1991; Meyer & Allen, 1991), Maertz and Campion introduced the 8 forces framework (the 9th force was extended in later research in 2012 by Maertz, Boyar and Pearson) including affective forces, contractual forces, calculative forces, alternative forces, behavioral forces, normative forces, moral forces, constituent forces, and location forces. Still, location category was stated "would be relevant to turnover decisions perhaps in case for metropolitan areas" (Maertz, Boyar, & Pearson, 2012), only the 8 former forces is valid for Ho Chi Minh City, Vietnam case.

The 8 forces framework synthesizes a well-defined conceptual framework that can (1) comprehensively explain why people stay or leave companies by clarifying mechanisms of voluntary turnover intention; (2) extend the already available researches with omitted constructs; (3) introduce a new model to study on employee turnover decision more practically and concisely (Maertz & Griffeth, 2004).

### *2.1 Affective forces*

A worker has feeling with respect to his or her working place, which leads to psychological comfort feeling triggering staying while psychological discomfort feeling triggering leaving (Maertz & Griffeth, 2004). As type, work environment and pay policy do cause emotion toward the organization that makes motivation on employees' attachment (Maertz et al.,

2012) through feeling good or negative affective response, which all mediated through affective forces.

## 2.2 Calculative forces

Each individual has his or her own value system which they base on to calculate their changes for pursuing future career goals at current firms (Mobley, Griffeth, Hand, & Meglino, 1979). If there are feelings that they can achieve their desired values, membership will be continued, and reverse (Maertz & Griffeth, 2004). Furthermore, it was said that salary offered and job effected employees' perception of fairly pay compared with other internal positions and substitute firms (Mueller & Price, 1990) might be considerable influencing workers future desired achievements, which implied by calculative forces.

## 2.3 Alternative forces

The availabilities of alternatives may motivate or attract employees to quit their current company for better changes (Jr, Boudreau, & Judge, 1994). Vice versa, when there are perceptions of not qualified and few alternative jobs around, employees will be psychologically pulled back to current job (e.g., March & Simon, 1958). As mentioned, Mueller and Price (1990) claimed job and pay level as important criteria workers used in forming sense of distributive justice of not only internal structure but also across different employers, which created impact on turnover making decision process. Hence, an employee can see whether alternative choices are more or less attractive.

## 2.4 Behavioral forces

Costs of leaving are believed to make impact on employees' attachment/ withdrawal intention. This category is divided into smaller dimensions including monetary rewards and organization training seniority (H. Becker, 1960; Meyer & Allen, 1991) addressed by *tangible costs of leaving*; possible inner costs caused by quitting such as regret feeling called *behavioral inertia*; and *psychological costs* prefers to individual self-interest and psychological motivation for staying mechanism which one wants to avoid. So, work and pay satisfaction can be considered as tangible and intangible dissonance cost of changing job behavior.

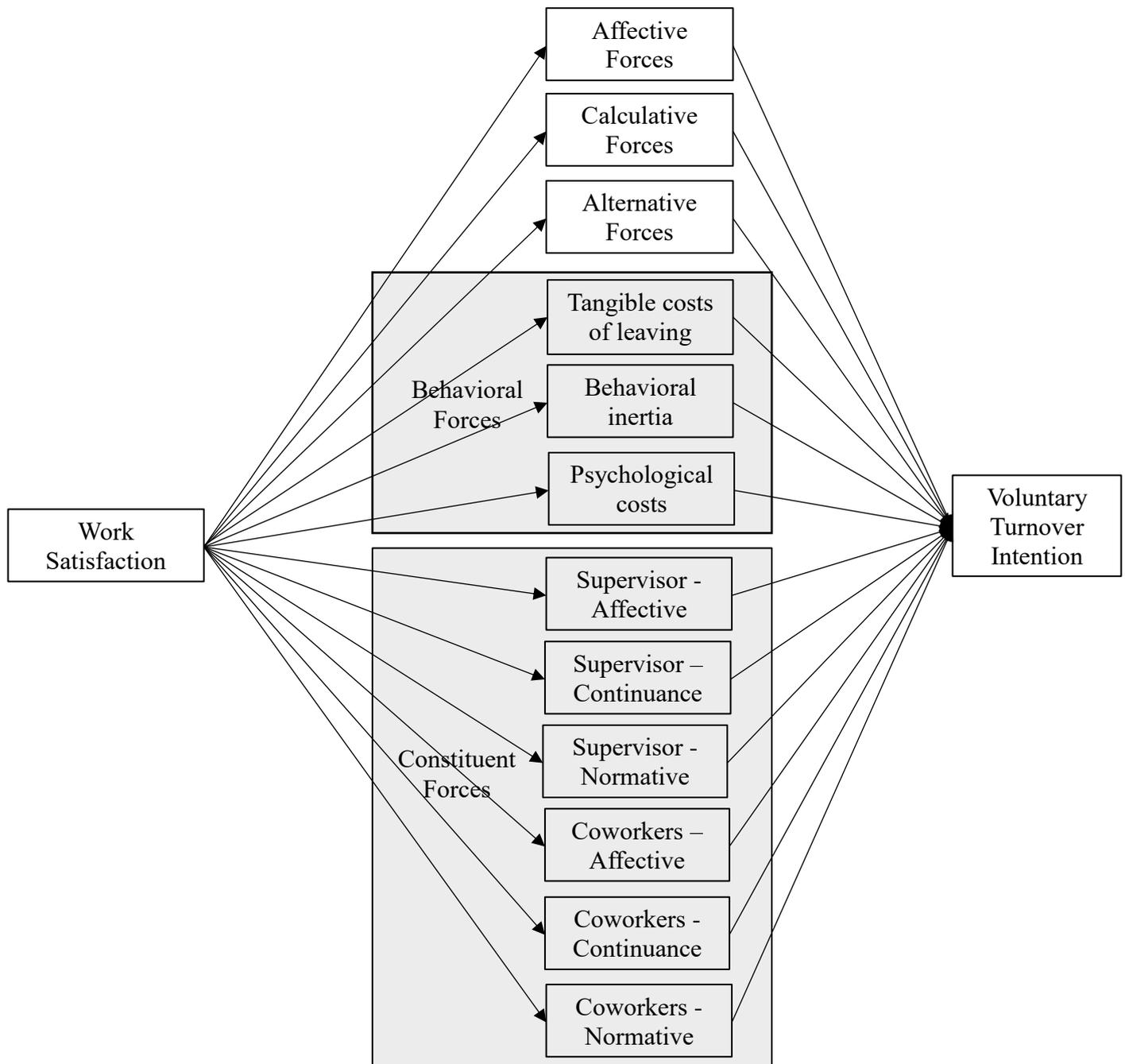
## 2.5 Constituent forces

Employees' relationships toward people with the organization are different from the organization itself. One has his or her feelings (affective), thankful/evaluating thinking (continuance), and ethical mechanism (normative) about supervisor and coworker coded as *supervisor – affective*, *supervisor – continuance*, *supervisor – normative*, *coworkers – affective*, *coworkers – continuance*, *coworkers – normative* respectively. Existed researches have shown constituent factor did effect on turnover decision (T. E. Becker, 1992). “To some extent, because supervisors directly control subordinates working tasks/ requirements and coworkers indirectly do colleagues, work is mediated by constituent forces” (Maertz Jr., Griffeth, Campbell, & Allen, 2007).

As mentioned above about the relation of work satisfaction and pay satisfaction toward the first 5 forces and their sub dimension, hypothesis 1 and 2 are stated below:

*H1: Work satisfaction effects on voluntary turnover intention will be mediated by affective, calculative, alternative, behavioral (tangible costs of leaving, behavioral inertia, psychological costs), and constituent (supervisor – affective, supervisor – continuance,*

*supervisor – normative, coworkers – affective, coworkers – continuance, coworkers – normative) forces.*



*Figure 1: Representation of hypothesis 1*

Source: (Maertz et al., 2012) adapted by author

*H2: Pay satisfaction effects on voluntary turnover intention will be mediated by affective, calculative, alternative, behavioral (tangible costs of leaving, behavioral inertia, psychological costs) forces.*

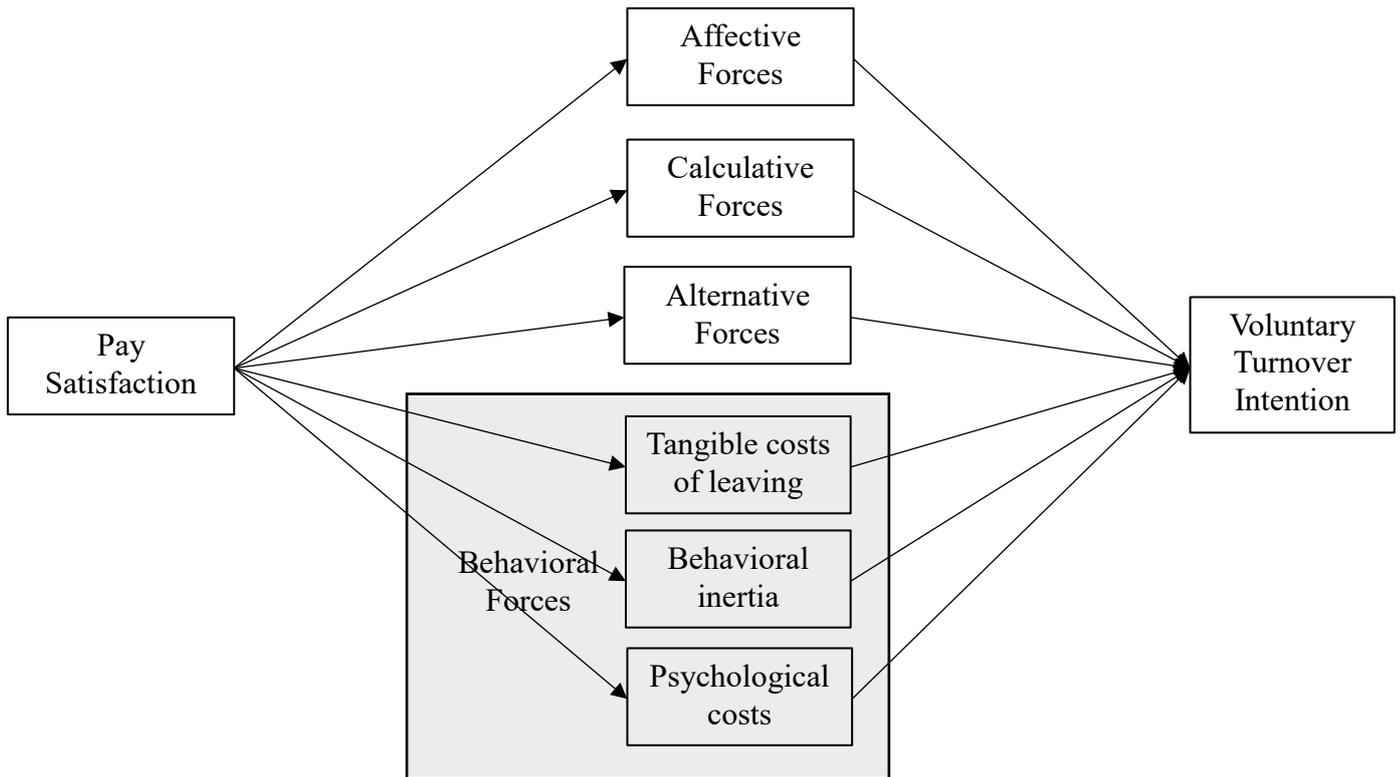


Figure 2: Representation of hypothesis 2  
 Source: (Maertz et al., 2012) adapted by author

### 2.6 Contractual forces

According to psychological contract theory, employees would commit with the organization as long as employers fulfilled agreed obligations written in agreement of employment (Coyle-Shapiro, 2002). Otherwise, contract violation may encourage workers to leave (Morrison & Robinson, 2000).

H3: Contractual forces affect voluntary turnover intention.

### 2.7 Normative forces

Express employees' awareness of external people about their current job at particular company (Prestholdt, Lane, & Mathews, 1987). If family and/or friends' expectations suggest to stay, one percept staying motivation, and reverse.

H4: Normative (*family*) forces affect voluntary turnover intention.

H5: Normative (*friends*) forces affect voluntary turnover intention.

### 2.8 Moral forces

There are two separated personal attitudes and believes as one highly emphasizes the good and important value of loyal to the company while one strongly thinks changing jobs is right thing to do for long term career (Festinger, 1957). Maertz and Boyar categorized *attachment* for the former and *withdrawal* for the later (2012).

H6: Moral (*attachment*) forces affect voluntary turnover intention.

H7: Moral (*withdrawal*) forces affect voluntary turnover intention.

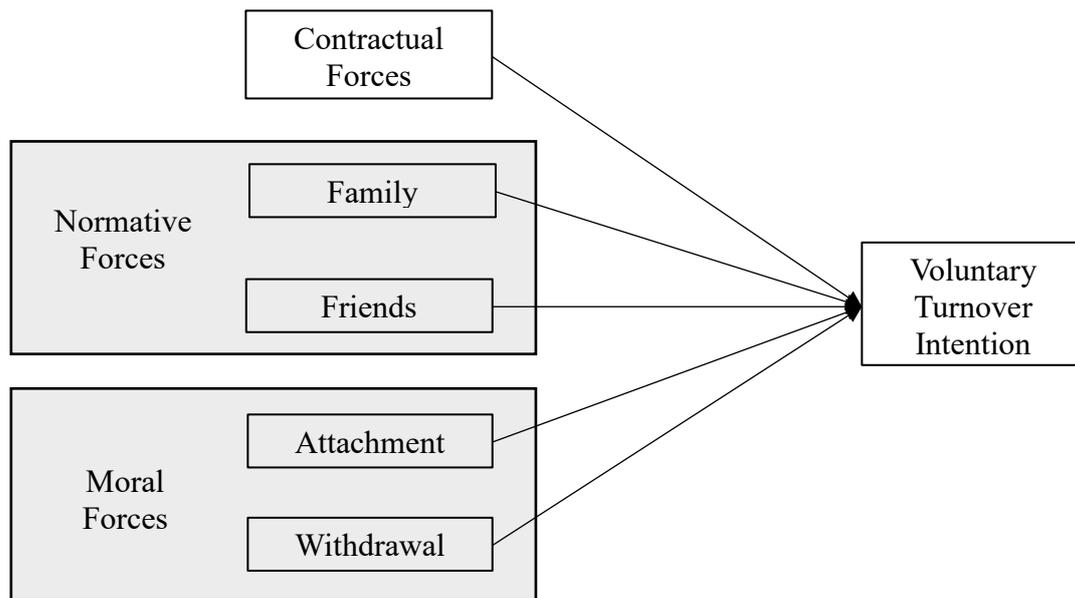


Figure 3: Representation of hypothesis 2, 3, 4, 5, 6, and 7

Source: (Maertz et al., 2012) adapted by author

### 3. Methodology

Surveys were distributed to 325 white-collar workers from 19 to 39 years old working/worked in trading and services sector in Ho Chi Minh from 14<sup>th</sup> to 23<sup>rd</sup>, November 2018 via online forms and face-to-face surveys.

The measurement scale of this research is based on Turnover-Attachment Motive Survey (TAMS) containing 18 scales for 8 forces (Maertz Jr. & Boyar, 2012). Work satisfaction variable has 5 items, pay satisfaction has 4 items (Irving & Meyer, 1994; Maertz et al., 2012; Paula, 1978). And voluntary turnover intention is measured by 5 items (Crossley & Burnfield, 2007; P.W. Hom & Griffeth, 1991; Maertz et al., 2012). Variables and constructs are measured on 7-point Likert-type scale coded 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = Agree, 7 = Strongly agree. All constructs of 8 forces were coded to positively mediate work satisfaction and pay satisfaction except alternative forces. Affective forces, calculative forces, behavioral (*tangible costs of leaving, behavioral inertia, psychological costs*) forces, constituent (*supervisor – affective, supervisor – continuance, supervisor – normative, coworkers – affective, coworkers – continuance, coworkers – normative*) forces, contractual forces, moral (*attachment*) forces were coded negatively affect voluntary turnover intention. In contrast, alternative forces, normative (*family, friends*) forces, moral (*withdrawal*) forces were coded positively affect voluntary turnover intention.

This study is expected to turn primary data collected via surveys into meaningful data through the application of rational and critical thinking as the antecedent constructs and research model are already existed. Quantitative data analysis approach is applied for the calculation. The SEM (Structural Equation Modeling) measurement in SmartPLS 3 and SPSS (Statistical Product and Services Solutions) measurement in IBM SPSS Statistics 20 are used to process reflective constructs (Maertz Jr. & Boyar, 2012) of this research model.

## 4. Data Analysis

### 4.1 Sample description

Among 325 respondents, there are 59.4% female, 39.7% male and 0.9% represents for 3 persons belong to other genders. Regarding to age, majority of respondents are from 19 to 24 years old occupying 68% and the percentages rapidly decrease as age ranges increase from 25-29, 30-34, 35-39 years old occupying 17.2%, 11.1%, and 3.7% respectively. Hence, the sample of this research is quite young within the Y generation. Furthermore, 92.9% have graduate level of education or studying at university/ college, while the remaining possess post graduate certificate. Monthly salary, on the other hand, allocates quite homologically among four separated ranges with highest portion is 39.1% of “from 6 – 12 million VND” group, and lowest part is 14.8% of “less than 3 million VND” group.

Table 1: Respondents profile

Items	Labels	Frequency	Percentage (%)
<b>Gender</b>	Male	129	39.7
	Female	193	59.4
	Other	3	0.9
	<i>Total</i>	<i>325</i>	<i>100</i>
<b>Age</b>	19-24	221	68
	25-29	56	17.2
	30-34	36	11.1
	35-39	12	3.7
	<i>Total</i>	<i>325</i>	<i>100</i>
<b>Education level</b>	University/ College	302	92.9
	Post graduate	23	7.1
	<i>Total</i>	<i>325</i>	<i>100</i>
<b>Monthly salary</b>	Less than 3 million VND	48	14.8
	From 3 - 6 million VND	80	24.6
	From 6 - 12 million VND	127	39.1
	Above 12 million VND	70	21.5
	<i>Total</i>	<i>325</i>	<i>100</i>

Source: Calculated by author

### 4.2 Research findings

#### 4.2.1 Variable variance

Voluntary turnover intention variable has  $R^2 = 0.707$  means work satisfaction, pay satisfaction and 8 forces: affective, calculative, alternative, behavioral (*tangible costs of leaving, behavioral inertia, psychological costs*), constituent (*supervisor – affective, supervisor – continuance, supervisor – normative, coworker – affective, coworker – continuance, coworker – normative*), contractual, normative (*family, friends*), moral (*attachment, withdrawal*) forces explain 70.7% of the variance in voluntary turnover intention. Besides, work satisfaction and pay satisfaction together explain for 67.8% and 60% of the variance in affective forces and calculative forces respectively.

Table 2: Coefficient of determination

Variables	R Square
Affective Forces	0.678
Calculative Forces	0.6
Alternative Forces	0.164
Behavioral Forces ( <i>Tangible Costs</i> )	0.263
Behavioral Forces ( <i>Behavioral Inertia</i> )	0.268
Behavioral Forces ( <i>Psychological Costs</i> )	0.338
Constituent Forces ( <i>Supervisor - Affective</i> )	0.332
Constituent Forces ( <i>Supervisor - Continuance</i> )	0.328
Constituent Forces ( <i>Supervisor - Normative</i> )	0.29
Constituent Forces ( <i>Coworkers - Affective</i> )	0.274
Constituent Forces ( <i>Coworkers - Continuance</i> )	0.239
Constituent Forces ( <i>Coworkers - Normative</i> )	0.248
<b>Voluntary Turnover Intention</b>	<b>0.707</b>

Source: Calculated by author

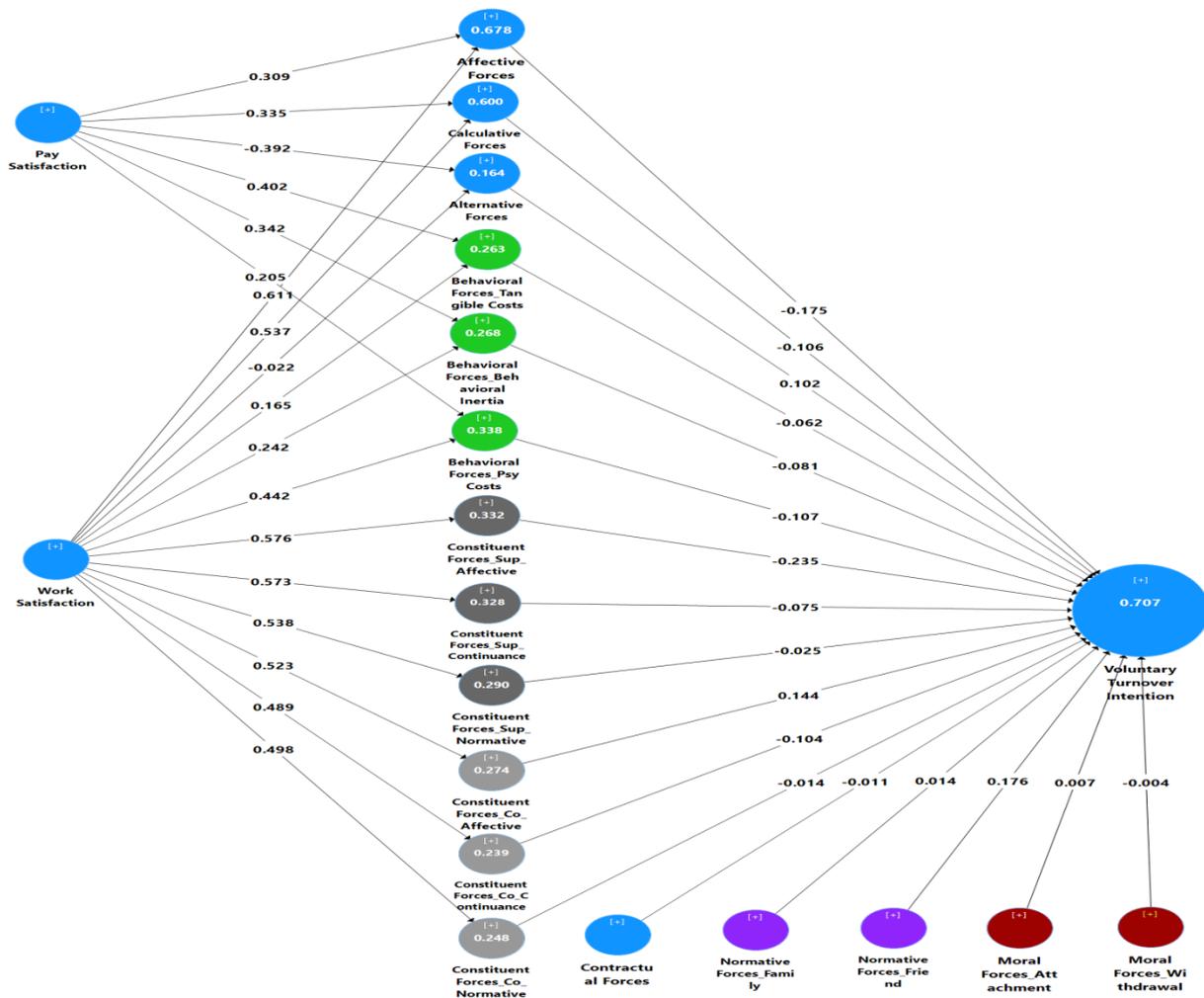


Figure 4: Coefficient

Source: Calculate by author using SmartPLS 3

### 4.3 Path coefficient

Both work satisfaction and pay satisfaction positively affect affective, calculative, behavioral, constituent forces and their dimensions, but alternative forces are negatively influenced. Pay satisfaction has statistically significant impact on all affective, calculative, behavioral, and alternative forces. As shown in table 3 below, pay satisfaction has greatest effect on tangible costs of leaving of behavioral forces with 0.402 coefficient index. Regarding to work satisfaction, except insignificant negative effect it has toward alternative forces, this independent variable effects significantly affective, calculative, behavioral and constituent forces, specially affective forces and constituent forces in *supervisor – affective* dimension with 0.611 and 0.576 coefficient number calculated respectively.

Table 3: Path coefficient of pay satisfaction and work satisfaction toward affective, calculative, alternative, behavioral, and constituent forces

	<b>Pay Satisfaction</b>	<b>Work Satisfaction</b>
Affective Forces	0.309	0.611
Calculative Forces	0.335	0.537
Alternative Forces	-0.392	-0.022
Behavioral Forces ( <i>Tangible Costs</i> )	0.402	0.165
Behavioral Forces ( <i>Behavioral Inertia</i> )	0.342	0.242
Behavioral Forces ( <i>Psychological Costs</i> )	0.205	0.442
Constituent Forces ( <i>Supervisor - Affective</i> )		0.576
Constituent Forces ( <i>Supervisor - Continuance</i> )		0.573
Constituent Forces ( <i>Supervisor - Normative</i> )		0.538
Constituent Forces ( <i>Coworkers - Affective</i> )		0.523
Constituent Forces ( <i>Coworkers - Continuance</i> )		0.489
Constituent Forces ( <i>Coworkers - Normative</i> )		0.498

Source: Calculated by author

Table 4: Path coefficient of 8 forces toward voluntary turnover intention

	<b>Voluntary Turnover Intention</b>
Affective Forces	-0.175
Calculative Forces	-0.106
Alternative Forces	0.102
Behavioral Forces ( <i>Tangible Costs</i> )	-0.062
Behavioral Forces ( <i>Behavioral Inertia</i> )	-0.081
Behavioral Forces ( <i>Psychological Costs</i> )	-0.107
Constituent Forces ( <i>Supervisor - Affective</i> )	-0.235
Constituent Forces ( <i>Supervisor - Continuance</i> )	-0.075
Constituent Forces ( <i>Supervisor - Normative</i> )	-0.025
Constituent Forces ( <i>Coworkers - Affective</i> )	0.144
Constituent Forces ( <i>Coworkers - Continuance</i> )	-0.104
Constituent Forces ( <i>Coworkers - Normative</i> )	-0.014
Contractual Forces	-0.011
Normative Forces ( <i>Family</i> )	0.014

Normative Forces ( <i>Friends</i> )	0.176
Moral Forces ( <i>Attachment</i> )	0.007
Moral Forces ( <i>Withdrawal</i> )	-0.004

Source: Calculated by author

Excepting alternative forces, constituent forces (*coworkers - affective*), normative forces, moral forces (*attachment*) have positive impact on turnover decision, all other forces and sub dimensions effect quitting motivation negatively. Which means as agree level of affective, calculative, behavioral, constituent (*supervisor – affective, supervisor – continuance, supervisor – normative, coworkers – continuance, coworkers – normative*), contractual, normative, moral (*withdrawal*) forces increase, the employee ‘s intention of leaving decrease, therefore he or she tend to commit with current organization. There are conflicts about the correlation between constituent forces (*coworkers - affective*), moral forces (*attachment, withdrawal*) toward intention of tuover compared with theoretical settings mentioned above, so we are going to discuss the reason why in the discussion and recommendation part.

Among these path coefficient indexes, affective, calculative, alternate, behavioral (*psychological costs*), constituent (*supervisor – affective, coworkers – affective, coworkers - continuance*), normative (*friends*) forces have statistically significant effect on voluntary turnover intention of generation Y white-collar employees in Ho Chi Minh City, Vietnam.

#### 4.4 Structural significance in Bootstrapping

	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Affective Forces -> Voluntary Turnover Intention	0.072	2.419	0.016
Calculative Forces -> Voluntary Turnover Intention	0.072	1.468	0.142
Alternative Forces -> Voluntary Turnover Intention	0.044	2.321	0.02
Behavioral Forces ( <i>Tangible Costs</i> ) -> Voluntary Turnover Intention	0.051	1.215	0.225
Behavioral Forces ( <i>Behavioral Inertia</i> ) -> Voluntary Turnover Intention	0.061	1.331	0.183
Behavioral Forces ( <i>Psychological Costs</i> ) -> Voluntary Turnover Intention	0.053	2.023	0.043
Constituent Forces ( <i>Supervisor - Affective</i> ) -> Voluntary Turnover Intention	0.08	2.945	0.003
Constituent Forces ( <i>Supervisor - Continuance</i> ) -> Voluntary Turnover Intention	0.072	1.035	0.301
Constituent Forces ( <i>Supervisor - Normative</i> ) -> Voluntary Turnover Intention	0.067	0.369	0.712
Constituent Forces ( <i>Coworker - Affective</i> ) -> Voluntary Turnover Intention	0.052	2.765	0.006

Constituent Forces ( <i>Coworker - Continuance</i> ) -> Voluntary Turnover Intention	0.062	1.684	0.092
Constituent Forces ( <i>Coworker - Normative</i> ) -> Voluntary Turnover Intention	0.056	0.246	0.806
Contractual Forces -> Voluntary Turnover Intention	0.047	0.224	0.823
Normative Forces ( <i>Family</i> ) -> Voluntary Turnover Intention	0.047	0.305	0.76
Normative Forces ( <i>Friend</i> ) -> Voluntary Turnover Intention	0.046	3.821	0
Moral Forces ( <i>Attachment</i> ) -> Voluntary Turnover Intention	0.046	0.142	0.887
Moral Forces ( <i>Withdrawal</i> ) -> Voluntary Turnover Intention	0.042	0.107	0.915
Work Satisfaction -> Affective Forces	0.046	13.413	0
Work Satisfaction -> Calculative Forces	0.055	9.772	0
Work Satisfaction -> Alternative Forces	0.074	0.297	0.766
Work Satisfaction -> Behavioral Forces ( <i>Tangible Costs</i> )	0.061	2.729	0.006
Work Satisfaction -> Behavioral Forces ( <i>Behavioral Inertia</i> )	0.061	3.974	0
Work Satisfaction -> Behavioral Forces ( <i>Psychological Costs</i> )	0.056	7.842	0
Work Satisfaction -> Constituent Forces ( <i>Supervisor - Affective</i> )	0.042	13.701	0
Work Satisfaction -> Constituent Forces ( <i>Supervisor - Continuance</i> )	0.041	13.983	0
Work Satisfaction -> Constituent Forces ( <i>Supervisor - Normative</i> )	0.044	12.166	0
Work Satisfaction -> Constituent Forces ( <i>Coworker - Affective</i> )	0.047	11.114	0
Work Satisfaction -> Constituent Forces ( <i>Coworker - Continuance</i> )	0.043	11.297	0
Work Satisfaction -> Constituent Forces ( <i>Coworker - Normative</i> )	0.048	10.454	0
Pay Satisfaction -> Affective Forces	0.048	6.424	0
Pay Satisfaction -> Calculative Forces	0.055	6.138	0
Pay Satisfaction -> Alternative Forces	0.065	5.994	0
Pay Satisfaction -> Behavioral Forces ( <i>Behavioral Inertia</i> )	0.056	6.114	0
Pay Satisfaction -> Behavioral Forces ( <i>Psychological Costs</i> )	0.058	3.556	0
Pay Satisfaction -> Behavioral Forces ( <i>Tangible Costs</i> )	0.06	6.707	0

- Regarding to hypothesis H1 and H2:

Work satisfaction and pay satisfaction have T-statistic 13.413 and 6.424 toward affective forces respectively, and affective forces have 2.419 indexes toward voluntary turnover intention. Hence work satisfaction and pay satisfaction effect voluntary turnover intention is mediated by affective forces.

Work satisfaction and pay satisfaction recorded T-statistic value 9.772 and 6.138 for calculative forces respectively but calculative forces have 1.468 T-statistic values toward voluntary turnover intention. Therefore, the impact of work and pay satisfaction on calculative forces is supported; likewise the influence of calculative forces on voluntary turnover intention is not.

While work satisfaction has no statistical power on alternative forces, pay satisfaction does have significant effect on alternative forces, and this construct also has effect on voluntary turnover intention as T-statistic values are greater than 1.96.

Both work and pay satisfaction have significant power on behavioral forces, but only *psychological costs* of behavioral forces has qualified T-statistic and p-value toward voluntary turnover intention. This means work and pay satisfaction effects on turnover decision are mediated mainly by *psychological costs* if employees leaving organization but not *tangible costs* of quitting or *behavioral inertia*.

Lastly, work satisfaction with T-statistic greater than 1.96 for all sub dimensions of constituent forces, and *supervisor – affective* with *coworker – affective* dimensions of this construct also have statistically significant power on voluntary turn over intention. Hence, work satisfaction effects turnover decision mediated mainly by affective factor from supervisor and coworker of constituent forces.

- Regarding to hypothesis H3, H4, H5, H6 and H7:

As T-statistic value of contractual forces, normative (*family*), moral (*attachment*) forces, and moral (*withdrawal*) are 0.224, 0.142 and 0.107 respectively, hypothesizes H3, H4, H6 and H7 are not supported. On the other hand, normative (friends) forces have T-statistic value equal 3.821, which shows normative forces do have effect on voluntary turnover intention but mainly through friend's part.

## 5. Discussion and Recommendation

The feeling of employees about their current organization (affective forces) is proved coming from work and pay satisfaction and also become a trigger of quitting motivation if that inner psychological emotion is discomfort and negative. Also, the validity of better alternatives are considerable reasons attract one starting to desire more and searching for better changes in career. The data analysis result also shows that the psychological costs of leaving is more powerful than tangible costs and behavioral inertia when workers take things into account for withdraw decision. This may be the outcome behavior of consisting to the very early motivation habit about current employment agreement among Vietnamese, here are young generations. Some people think about the reason why did they start doing this position, why did they choose this firm but no other, and what they have told others about this job then they try to hold on till the end to see the final destination they can achieve, whether it is pride or regression, and because of their own ego about their making decision ability.

Furthermore, numbers of constituent (*supervisor – affective*) forces point out these factors' effect on motive of staying or leaving again emphasize the important role of inner feeling, self-values and psychological emotion of Vietnamese youth, specifically who are white-collar workers in Ho Chi Minh City nowadays. As the living standard and quality improving rapidly

with the city and country economic development, Ho Chi Minh workers have not worked for making the living only, people are searching sustainable career for long run, not just a job at boring offices. The research also shows that constituent (*coworkers – affective*) forces do have significant effect on intention of quitting, but this positive correlation againsts what we coded. Based on the result, it may be concluded that majority of young office employees who answered our survey aware that they had satisfied workforce in term of coworkers, but it is not a big deal compared with direct influence from their superiors. It is seemed that employees would work with good superiors rather than closed colleagues. The powerful effect of employees' relationship and feeling about their supervisors once again reminds employers about reason why employees quit, "employees do not leave the organization, they leave their supervisors actually".

Regarding to *attachment* and *withdrawal* tendency addressed in normative forces, although there is no statistically significance in this case, the mean of these two are quite interesting. Item 2 and 3 of *attachment* tendency asked about an individual belief "moving from job to job is bad" and "people who quit many jobs will be sorry" received mean at 3.73 and 3.62 respectively, which come from majority of respondent disagree to these statements. While item 2 of *withdrawal* tendency stated "I believe that changing jobs makes life interesting" recorded mean value at 5.03 showing that most respondent prefer agree answer. Hence, there is possible new tendency about turnover within young white-collar employees in trading and services industries. Despite *attachment* and *withdrawal* dimensions did not have great impact on turnover variable because of being loyal to an organization or being risk taking are somehow till one 's self-interest while turnover decision related to particular condition and case. For example, a person who is risk avoidance and highly prefers attachment but working at unqualified and Discomfort Company, he or she tends to search for better change. And reversely, a person enjoys changes and new environment but if that person found out place he or she belongs to, that employee still choose to stay rather than quitting. This is also the explanation for the conflict correlation between our data analysis result and the theoretical argument.

Last but not least, normative forces show significant effect through *friends* dimension compared with *family* influence. This may be explained by the sample profile whereas 68% were from 19 to 24 years old and majority of those are unmarried. Therefore, the effect of employees' perception about friends' expectation is taken in account.

Based on the study findings, we have some suggestion for implication that employers operating business in trading and services industries in Ho Chi Minh City, Vietnam may find them useful to improve human resources management performance to the extent of turnover issue:

*Right recruit*: recruiting the right personal for right position. Choosing right person is taking in concern the organization culture, value and working environment compared with potential candidates' self-interest and value system. And assigning that right person to his or her appropriate position in term of that person's abilities, skills, career goals, tangible value fulfillment desire. By doing thing right from the beginning, company can not only reduce negative consequences of high turnover rate but also can create its own working place.

Right manager for the organization as the whole: as supervisor directly influences employees feeling and evaluation on company, experienced and skillful manager is not enough, he or her should be a good manager, not a powerful boss. It would be better if organizations focus on assigning suitable superiors instead of friendly colleagues. And as good managers attract good

subordinates and employ right personal, coworkers themselves may response following their appropriate supervisor.

Investment in employees: creating the company's fame not only via monetary performance but also through employees' satisfaction. Healthy working environment at the same time pulls organization out of high turnover rate crisis, and keeps qualified human resources of company available by standing as alternatives for potential newbies.

## 6. Conclusion

Briefly, work satisfaction effects on voluntary turnover intention are mediated by affective forces, behavioral forces (through *psychological costs* dimension), and constituent forces (through *supervisor – affective* dimension), *coworkers – affective* dimension should not be taken in account this time. Pay satisfaction effects on intention of voluntary turnover are mediated by affective forces, alternative forces, and behavioral forces (through *psychological costs* dimension). Both work and pay satisfaction has significant effects on calculative forces but this construct effects on turnover decision are not supported. While independent variable called normative forces – *friends* shows statistically significant impact on turnover intention variable.

The research accomplished the objective of understanding reasons why employees staying or leaving an organization by applying a new and comprehensive model to study on. However, there still exists limitations about the processing time range, geographical conditions and authors' resources, the results are not accurately for millennials in Vietnam as the whole. More comprehensive researches are recommended.

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# AN INVESTIGATION OF FACTORS AFFECTING TURNOVER INTENTION OF BLUE-COLLAR WORKER THROUGH JOB SATISFACTION: THE CASE OF BLUE-COLLAR WORKER IN MANUFACTURING INDUSTRY IN HO CHI MINH CITY

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## **Abstract**

The goal of study is to examine factors affecting turnover intention of Blue-collar workers in manufacturing industry in Ho Chi Minh City, Vietnam. In line with other researches, this study is conducted by quantitative approach and utilizes SmartPLS 3.0 software for analysis a sample size of 404 respondents. This paper reveals some significant findings about the impacts of Job Satisfaction on Turnover Intention of blue-collar workers. Furthermore, the study also points out that high level of Job Stress is a main reason which turn predicts higher turnover rate. Following the results are the several recommendations for retaining and improving manual labor in manufacturing companies in Vietnam.

**Keywords:** *Turnover Intention, Job Satisfaction, Job Stress, Blue-Collar Worker, Manufacturing Industry.*

## **1. Introduction**

Human Resource plays an important role to any organization, especially for gaining competitive advantage around the world [1]. Besides, workers are the most important asset of the organization, which raises a major challenge for any organization to retain its workforce since a lot of incurred cost will be added on them directly or indirectly. That is the reason why the policy about worker retention and attraction is very important and worker's job satisfaction should be considered as one of the key points of this issue [2]. Moreover, many organizations are designing the strategies for the workers retention so that they do not add more budgets on finding new ones and still ensure the progress of work. Therefore, the workforce retention is a main key issue of concern.

In human resources management, turnover rate is always a primary concern to any organization [3]. Currently, there are many studies about worker's job satisfaction in Vietnam but turnover intention of worker is also really a matter of concern for enterprises in Vietnam without too much caring. Especially with the workforce named "blue-collar worker" that takes a considerable percentage in the aging workforce in Ho Chi Minh City. However, it can be easily seen that this workforce also has a higher percentage of quitting job compared to the white-collar worker or the pink-collar worker. In fact, this poses a complicated issue for the human resource managers.

According to a research of Center of Forecasting Manpower Needs and Labor Market Information in Ho Chi Minh City in 2016, the employee fluctuation rate in an enterprise should be stable at 4% to 6%. However, the survey of this center also shows that the turnover rate of workers in local companies is 17.8% and the figure is 14.2% in MNCs [5]. Moreover, the CEO of Anphabe Company predicts that turnover rate of workers in 2018 will be up to 20% or more [6]. On the other hand, according to the Mercer – Talentnet in 2014 the turnover rate of unskilled workforce or blue-collar workers accounts for 23.1% [7]. Therefore, until

2018, at roughly 50% of total demands in Ho Chi Minh City for new recruitment are the unskilled workers. And, the problem about blue-collar workers has not yet been solved.

In another aspect, according to Center of Forecasting Manpower in 2018, the demand of blue-collar workers in four key manufacturing industries accounts for roughly 45% compared to the other industries [8]. Thus, recruiting the new workers as well as retaining the old workers in those companies always should be conducted concurrently. However, an issue workers' resigning from their companies only after a few months of working is the common action happening in this city, especially with manual labor. In fact, the manufacturing company has to spend a high cost for its workers training or recruitment, but workers think that the business has not met their needs yet, leading to their low satisfaction or even exit. Therefore, in this context, it is very necessary to do a research "An investigation of factors affecting turnover intention: The mediating effects of job satisfaction and job stress – The case of blue-collar worker in manufacturing industry in Ho Chi Minh City". The following questions will be answers through this study:

- What are factors affecting turnover intention of blue-collar worker through job satisfaction?
- What are relationships among job stress, job satisfaction, self-determined work motivation and turnover intention of blue-collar worker?
- What should manufacturing companies do to increase job satisfaction, reduce job stress and turnover intention of blue-collar worker?

## **2. Literature Review**

### *2.1 Turnover intention*

Turnover intention is described as the desire to leave an organization of a person [9]. Turnover intention is a behavioral intention to quit the job. According to research of Bigliardi (2005) turnover intention states an individuals' likelihood that they will stay or leave the organization which they belong [10].

According to Fishbein and Ajzen (1975), — "the best single predictor of an individual's behavior will be a measure of his intention to perform that behavior". Thus, it is legitimate to use it as a consequence variable in turnover studies [11]. With the employers, the actual act of turnover is concerned more important measure than intention. Empirical evidence highly supports the intention of staying or leaving is powerful and consistent involved in voluntary turnover [12].

### *2.2 Job satisfaction*

Worker job satisfaction is considered within empirical studies as an overall feeling about job, or job satisfaction affects individuals' attitude towards their jobs and various aspects of their jobs (Spector, 1997), he states "job satisfaction is simply how people feel about their jobs and different aspects of their jobs" [13]. It is the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs. Locke (1976) described worker satisfaction as "[...] a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience" [14].

### *2.3 Salary*

That is the first factor influencing on worker satisfaction which the people could think of. Singh and Jain (2013) considered as "This is the most important variable for employee

satisfaction” [15]. According to their research, a worker will expect a compensation amount as a reward from his job and be satisfied when it is fair, equitable and competitive. Another similar opinion is supported by Mafini and Dlodlo (2013), the workers would feel satisfied if their payment was fair and could meet their individual’s needs [16].

#### *2.4 Fringe benefits*

Fringe benefit contains the material and non-material incentives the company offer to workers to fit them with the organization. In other words, fringe benefits are the additional incentives that workers receive apart from their monthly income during active job responsibility and after retirement, too [17]. Fringe benefit consists of three main parts: obvious benefits, foregone labor benefits and hidden benefits [18].

#### *2.5 Working conditions*

Physical working conditions consist of factors related to job including “satisfactory work space, appropriate lighting, noise, thermal environment, usability-related issues and office equipment, etc.” (Turkyilmaz at al., 2011). It will increase workers’ job satisfaction. These workers could be more satisfied with working environment that leads to enhance favorably on their job satisfaction as well as their job performance [19].

#### *2.6 Supervision*

The supervisors are the trainers, managers who support their workers not only in working but also in some individual problems in life [20]. Nevertheless, these managers also play an crucial role in deciding their workers’ performance. Therefore, for workers, it is certain that they will intend to satisfy with the managers giving them more advantages than punishment.

#### *2.7 Career and personal development opportunities*

Carter (2010) stated that “an individual's profession advancement is a lifetime procedure that envelops the development and change procedure of youth, the formal vocation training at school, and the maturational procedures that proceed all through a person's working adulthood and into retirement” [21]. Heery and Noon (2001) described advancement as “getting high status in working environment by doing successful work, for the most part build the status, position and compensation of worker in the association” [22].

Graham (1986) characterizes advancement as "moving from lower assignment to high assignment inside an association and as a rule increment in pay bundle". In the event that associations are not offering advancement to their representatives then workers will be disappointed and leads to higher turnover rate [23].

#### *2.8 Job stress*

According to Beehr and Newman referred from Randall S. Schuler (1980) after Beehr and Newman review an extensive of selected research on stress defined "job stress as a condition wherein job related factors interact with the worker to change (disrupt or enhance) his/her psychological or physiological condition such that the person (mind and or body) is forced to deviate from normal functioning." [24]

## 2.9 Role of Self-determined work motivation (SDWM)

Vroom's (1964) built a theory of motivation, Porter and Lawler (1968) proposed a model of intrinsic and extrinsic work motivation [25]. Intrinsic motivation relates to a worker performing a task because they find it interesting and derive job satisfaction from the work itself. Extrinsic motivation, on the contrary, requires an instrumentality between the working and some separable outcomes such as tangible or verbal rewards, thus job satisfaction not comes from the work itself but rather from the extrinsic consequences to which the working leads.

Porter and Lawler (1968) supported forming the working condition to enhance performance that leads to both intrinsic and extrinsic rewards, which would creating overall job satisfaction [26]. That was to be achievable by expanding jobs to make them more interesting, and so more intrinsic rewards, and by making extrinsically rewarding such as higher salary and advancements clearly depends on performing work effectively.

Table 1: Previous reviews

No	Research title	Authors - Year	Findings
01	Empirical study of public sector employee loyalty and satisfaction	Ali Turkyilmaz et al. (2011)	Results refer that there is a significant relationship between employee satisfaction and loyalty in the public area. Training and personal development was explored the most impacting factor on customer satisfaction. The research also indicates that working conditions positively affects employee satisfaction.
02	TQM practice in maquiladora: Antecedents of employee satisfaction and loyalty	Minjoon Jun et al. (2006)	Research aim is to isolate critical TQM practices that enhance employee satisfaction and loyalty among maquiladora workers. The statistical results reveal that empowerment, teamwork, training, and compensation significantly and positively affect employee satisfaction. Thanks to improving employee satisfaction, the higher level of employee loyalty could gain.
03	An Empirical Study of the Relationship Among Job Satisfaction, Organizational Commitment and Turnover Intention	-Sinem Aydogdu -Baris Asikil (2011)	Job Satisfaction has a significant and positive relationship with three aspects of organizational commitment and turnover intention has a significant and negative relationship with job satisfaction and organizational commitment.
04	A moderated mediation model of job stress, job satisfaction, and turnover intention	Eun Kyoung Chung, Yeseul Jung and Young Woo Sohn (2017)	The results demonstrate that the meditation model of job stress, job satisfaction and turnover intention can be applied to airport security screeners (ASSs). And, it supports the significance of individual motivation in

	for airport security screeners		selecting and managing ASSs. Taken together, the findings propose that job longevity among ASSs which has a significant relationship with job stress, job satisfaction and turnover intention.
<b>05</b>	Municipal Clerks: Examining a Model of Job Satisfaction	- Victoria Gordon et al. (2010)	The relationships among job satisfaction, working conditions, advancement and promotion – training opportunities.
<b>06</b>	The relationship of job stress with turnover intention and job performance: Moderating role of OBSE	Nasrin Arshadi and Hojat Damiri (2013)	The study examines the moderating role of organization-based self-esteem (OBSE) in relationship among job stress, job performance and turnover intention in Iran.
<b>07</b>	Creativity and turnover intention among hotel chefs: The mediating effects of job satisfaction and job stress	Patcharanan Tongchaiprasit and Vanchai Ariyabuddhiphongs (2016)	The research presents the relationships among chefs' creativity, job satisfaction, job stress and turnover intention with creativity was found in turnover prediction through meditation of job satisfaction and job stress.

Based on the previous studies of the relationship between turnover intention and job satisfaction factors. We suggest the following hypotheses to examine proposed model.

### 2.10 Summary of hypotheses

*H<sub>1</sub>*: Blue-collar workers' job satisfaction will be positively affected by Salary

*H<sub>2</sub>*: Blue-collar workers' job satisfaction will be positively affected by Fringe benefits

*H<sub>3</sub>*: Blue-collar workers' job satisfaction will be positively affected by Working conditions

*H<sub>4</sub>*: Blue-collar workers' job satisfaction will be positively affected by Supervision

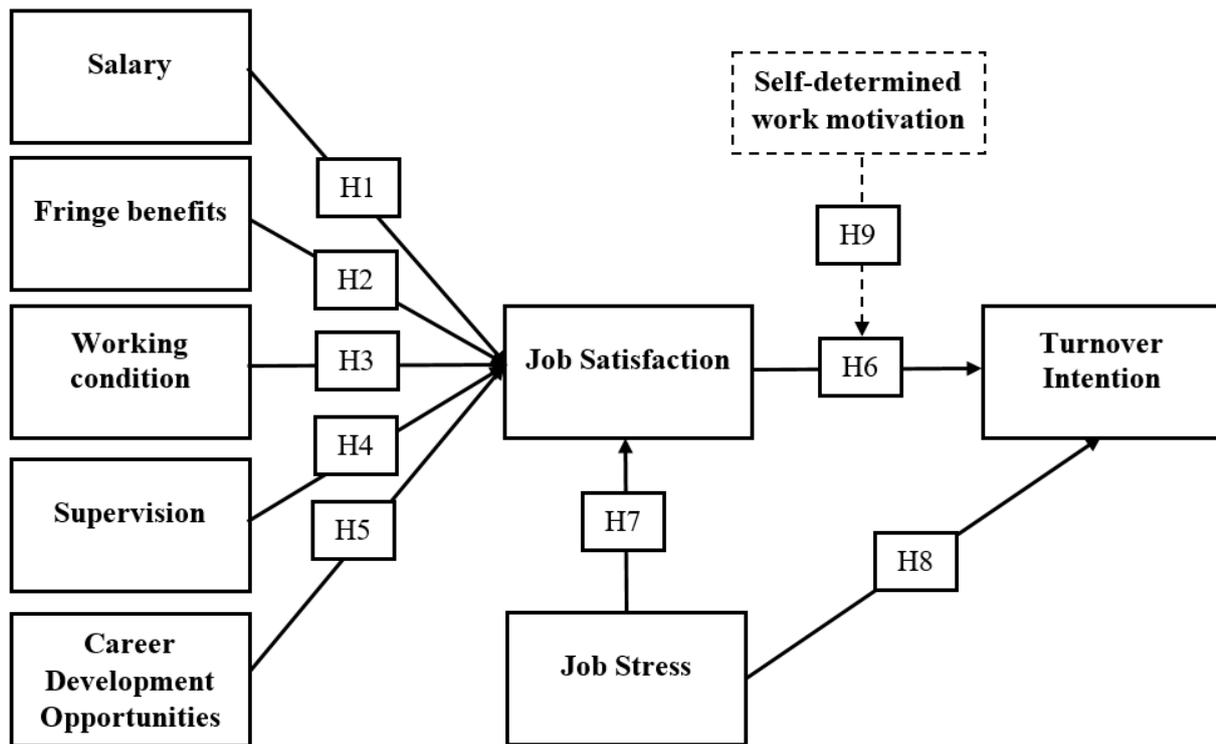
*H<sub>5</sub>*: Blue-collar workers' job satisfaction will be positively affected by Career development opportunities

*H<sub>6</sub>*: Turnover intention of blue-collar worker will be negatively affected by Job satisfaction

*H<sub>7</sub>*: Blue-collar workers' job satisfaction will be negatively affected by Job stress

*H<sub>8</sub>*: Turnover intention of blue-collar worker will be positively affected by Job stress

*H<sub>9</sub>*: Self-determined work motivation will moderate the relationship between Job satisfaction and Turnover intention of blue-collar workers



**Figure 1:** Conceptual model (Adapted and modified from Turkylmaz et al., 2011 and Eun Kyoung Chung, Yeseul Jung and Young Woo Sohn, 2017)

### 3. Methodology

#### 3.1 Sampling and Data Collection Method

This research will solely be using the quantitative research approach to achieve the purpose research, to assess satisfaction and turnover intention of blue-collar workers. Questionnaires were distributed randomly to the workers who are working in manufacturing companies in Ho Chi Minh City from November 1<sup>st</sup>, 2018 to November 15<sup>th</sup>, 2018.

A total of 450 questionnaires is delivered directly to blue-collar workers who are working in the industrial parks, free trade zones and factories in Ho Chi Minh City with directions and precise contents to help them give answer correctly. However, only 421 questionnaires were collected and there were 404 valid responses.

To measure turnover intention of blue-collar workers in this study, the questionnaire will be designed in form of Likert 5-point-scale ranging from strongly disagree (1) to strongly agree (5).

#### 3.2 Construct Measurement

This study utilizes a reflective measurement scale because of some reasons. First, the indicators are associated with a specific construct and highly correlated together. Second, they are interchangeable. If any items of a construct are eliminated, the meaning will be preserved without any changing [27].

#### 4. Data Analysis

Table 2: Demographic profiles

Items	Labels	Frequencies	Percentage (%)
<b>Gender</b>	Male	166	41.2
	Female	238	58.8
	<i>Total</i>	404	100
<b>Age (years old)</b>	Under 20	21	5.2
	21 - 30	114	28.2
	31 - 40	247	61.1
	41 - 50	18	4.4
	Above 50	4	1.1
	<i>Total</i>	404	100
<b>Working experience (years)</b>	2 – 5	107	26.5
	5 – 10	268	66.3
	> 10	29	7.2
	<i>Total</i>	404	100
<b>Monthly Income (Million Vietnamese dong)</b>	5 – 7	204	50.6
	7 – 10	167	41.3
	> 10	33	8.1
	<i>Total</i>	404	100

Based on the table, among 404 participants conducted the surveys, the female are approximately 58.8% while the number of male account for 41.2%. In terms of age group, the group ranging from 31 to 40 years old (61.1%) is dominant, whereas the group of over 50 made up for 1%. Besides, the group ranging from 21 to 30 accounts for 28.2% that compared to group under 20 years old is only 5.2%.

There are three working experience categories which are 2 – 5 years, 5 – 10 years and above 10 years. It is clearly that the blue-collar workers with 5 – 10 years of working experience have the highest proportion (66.3%), the 2-5 years group accounts for 26.5%, and the >50 years category is only 7.2%. Majority of the respondents are workers, whose monthly income is around 5 – 7 million VND (50.6%), followed by approximately 41.3% workers with the salary 7 – 10 million VND per month and that figure is just roughly 8.1% for another group – Above 10 million VND.

Table 3: Assessment of reliability and convergent validity

Variables	Outer loading	Cronbach's Alpha	Composite Reliability	AVE
<i>Career development opportunity</i>	0.794 – 0.873	0.793	0.876	0.701
<i>Fringe benefit</i>	0.761 – 0.885	0.864	0.907	0.710
<i>Working Condition</i>	0.774 – 0.857	0.831	0.886	0.660
<i>Job stress</i>	0.850 – 0.861	0.877	0.916	0.731
<i>Salary</i>	0.707 – 0.819	0.621	0.790	0.557
<i>Self-determined work motivation</i>	0.854 – 0.880	0.947	0.956	0.757
<i>Supervision</i>	0.777 – 0.822	0.826	0.882	0.652
<i>Turnover intention</i>	0.761 – 0.825	0.719	0.842	0.640
<i>Job satisfaction</i>	0.818 – 0.836	0.885	0.916	0.685

This research uses SmartPLS software version 3.0 for data analysis. Firstly, confirmatory factor analysis (CFA) was conducted to test whether data is valid or not. The validity test includes examining both the convergent validity and discriminant validity of the data. To examine whether the items can be effectively fit their factors, a convergent validity test was employed; while to examine how two different factors are statistical distance, a discriminant validity test was conducted.

The average variance extracted (AVE), composite reliability (CR), outer loading, and Cronbach's Alpha value are listed in Table 2. From the table, all values of loading are higher than 0.7, all AVEs passed the standard of 0.5, and all Alpha values passed the standard of 0.6. Therefore, the scale completely passed the convergent validity test [28]. Furthermore, from the table, all the CRs are greater than the standard of 0.7, which showing the good and reliable scale [29].

Table 4: Assessment of discriminant validity

	1	2	3	4	5	6	7	8	9
Career development opportunity	0.837								
Fringe benefit	0.052	0.843							
Job satisfaction	-0.127	0.497	0.827						
Job stress	-0.174	-0.028	-0.011	0.855					
Salary	0.206	0.175	0.231	-0.425	0.746				
Self-determined work motivation	0.307	0.030	0.129	-0.057	0.082	0.807			
Supervision	-0.257	-0.018	0.091	0.276	-0.171	-0.102	0.870		
Turnover intention	-0.259	-0.209	-0.167	0.523	-0.587	-0.152	0.169	0.800	
Working condition	0.190	0.217	0.205	-0.038	0.187	0.212	-0.085	-0.254	0.813

Secondly, Table 3 lists the factor correlation coefficients and the square root of the AVE. From the table, “the square root of AVE for each variable is higher than the highest correlation with any other variables”. Therefore, the measurement scale safely passed the discriminant validity test [30].

Table 5: Result for research model (\*\*p<0.05 and \*\*\*p<0.01)

Hypothesis	Path coefficients	T Statistics	P Value	Results
H <sub>1</sub> : Salary positively affects job satisfaction	0.197	4.032	***	Supported
H <sub>2</sub> : Fringe benefits positively affects job satisfaction	0.454	8.658	***	Supported
H <sub>3</sub> : Working condition positively affects job satisfaction	0.085	1.996	0.046**	Supported

H <sub>4</sub> : Supervision positively affects job satisfaction	0.160	3.263	***	<b>Supported</b>
H <sub>5</sub> : Career development opportunity positively affects job satisfaction	<b>-0.247</b>	4.374	***	<i>Not supported</i>
H <sub>6</sub> : Job satisfaction negatively affects turnover intention	-0.166	3.402	***	<b>Supported</b>
H <sub>7</sub> : Job stress negatively affects job satisfaction	-0.055	<b>1.118</b>	<b>0.264</b>	<i>Not supported</i>
H <sub>8</sub> : Job stress positively affects turnover intention	0.509	12.396	***	<b>Supported</b>
H <sub>9</sub> : Self-determined work motivation moderates relationship between job satisfaction and turnover intention	0.044	<b>1.128</b>	<b>0.259</b>	<i>Not supported</i>

Thirdly, we applied structural equation modeling (SEM) and bootstrapping to examine the proposed model. Table 4 lists the factor's path coefficients and their significance. From the table 4, the p- value reveals that the Hypothesis 1, 2, 3 and 4 are statistically significant with the figure smaller than 0.01. That means four independent variables included Salary, Fringe Benefits, Working Condition and Supervision have a positive impact on job satisfaction of blue-collar workers. Moreover, hypothesis 6 is also supported which explains that the higher job satisfaction leads to the lower Turnover rate of the workers. Specially, the results of hypothesis 7 and 8 proved that Job Stress only positively affects turnover intention without influencing on job satisfaction.

On the other hand, the results of two hypotheses 5 and 9 show that there is no significant relationship between Career Development Opportunities and job satisfaction of workers working in factories, as well as there is no contribution of moderator variable – Self-determined Work Motivation to the relationship between job satisfaction and turnover intention of blue-collar workers.

## 5. Discussion and Recommendation

### 5.1 Discussion

In general, from table 4 above, there are six hypotheses are supported explaining for statistical significance to proposed model. The results have shown that job stress directly affects turnover intention, followed by fringe benefits, salary, and supervision and working condition, all of which indirectly affect turnover intention of blue-collar workers through job satisfaction.

First, in this study, job stress ( $\beta=0.509$ ) was explored to be the most important factor on turnover intention of blue-collar workers with the  $\beta$  value equals to 0.51. This result is reliable to conclusion of the Layne (2004) study [31]. Job stress was informed to be a significant influence on turnover intention among Korean nurses [32] and the high job stress predicted the higher turnover rate among Australian alcohol and other drug workers [33]. Moreover, the result of study also presents that job stress directly impacts on turnover intention without through job satisfaction. This conclusion is in contrast with Applebaum research in 2010 as he supposed “the stressors in the work environment influence the job satisfaction of employees which in turn leads to the intention to leave the job” [34]. There are two main reasons for this difference. Firstly, the examining object in this research is blue-collar workers who are working in factories and industrial parks. Job stress is an unclear issue with them and whenever they feel unsatisfied with something in the workplace, they willing to quit the job

immediately without caring too much about job satisfaction or not. Secondly, this research is limited in Ho Chi Minh City, Vietnam and it only focuses on workers in manufacturing industry, thus although the relationship between job stress and job satisfaction is proved, it is still unclear in the context of this research.

Second, from Table 4, fringe benefits ( $\beta=0.454$ ) is the most significant factor to decide the level of job satisfaction among workers in factories. Based on research of Artz (2010), fringe benefits are the important and positive predictor of job satisfaction [35]. That is entirely appropriate to the outcome of this study. Moreover, fringe benefits plays as a motivator element that encourages to improve worker productivity and to cut down turnover rate [36].

Third, salary ( $\beta=0.197$ ) was explored to be the second key factor that affect job satisfaction. This conclusion is also reliable to study of the Jun et al. (2006) and Maurer (2001) [37]. Manufacturing companies should develop fairly a salary and reward system to encourage worker efforts. Any workers or any groups could show their efforts in working process, the company should give some rewards to praise and stimulate their good performances.

Fourth, the supervision ( $\beta=0.16$ ) is one of statistically significant predictors of job satisfaction. The result indicates that job satisfaction amongst workers raises and is dependent upon the quality of supervision. Workers are very satisfied with good supervisions because they always try to help their jobs as well as the colleague relationships [38].

Fifth, working condition ( $\beta=0.085$ ) has also a significant effect on job satisfaction. It is clearly that working condition is a critical factor to determine the level of workers' job satisfaction [39]. Job satisfaction can be impacted by the quality of the physical environment in which they satisfy with their work.

Finally, this study examined the factors affecting the turnover intention of the blue-collar workers in manufacturing companies in Ho Chi Minh City. Four factors of job satisfaction were found to be the most crucial factors influence on job satisfaction, through which affects turnover intention. The results show that there is a negative relationship between job satisfaction ( $\beta=-0.166$ ) and turnover intention. By examining outcomes variables affecting job satisfaction and turnover intention, this study pointed out that estimated the job satisfaction is very important and necessary in further restricting turnover intention of workers.

## *5.2 Recommendation*

*What should manufacturing companies do to increase job satisfaction, reduce job stress and turnover intention of blue-collar worker?*

From the results of this research, there are four important factors that indirectly affect turnover intention of blue-collar workers through job satisfaction. They are fringe benefits, salary, supervision and working condition. That means the higher salary, supervision and better fringe benefits, working condition, the lower turnover rate. Furthermore, job stress is proved as a factor has both positive and direct effects on turnover intention. Therefore, to develop management strategy to retain and improve workforce, especially with manual labor, manufacturing companies should take into consideration of those four significant factors.

Firstly, job stress is the most important factor that affects turnover intention of blue-collar workers who are working in factories and industrial parks in Ho Chi Minh City. Based on the information from the examined workers, the greatest obsession and pressure at work with

them is “overtime”. Many of them said that they work 12 hours per day, overtime 4 hours a day and 6 days a week. If they work 26 days per month, the overtime is 96 hours per month and the estimated overtime is up to 1,000 hours per year [41]. How terrible it is! Therefore, within this study, some recommendations are suggested to solve partly this problem. First, overtime policies must comply with the labor law, it means not exceeding 300 hours per year with the workers working in the manufacturing industry. The company has to pay fully for workers in accordance with the policies. Moreover, providing the additional payment and mental support to workers are necessary that they can both work overtime and still ensure their health stability. For example, in the working overtime days, the company must ensure more nutrition for workers’ meal so that they could adapt to more workloads than normal days. Besides, the company should have the practical allowances for workers whose overtime is more than 300 hours per year, so that encouraging them with more motivations to contribute for company. Finally, workers must take the law into their own hands to avoid being squeezed by the company.

Secondly, for blue-collar workers, the most important factor influencing on their job satisfaction is fringe benefits, not salary. Because for them salary is only a part of daily life, however, the fringe benefits are really valuable to them in the situations when they get difficulties or danger. For instance, if they get an accident when they are working, accident insurance will take care them, if they lose their job, the unemployment insurance will pay for them,... That also explains why fringe benefits play a vital role to job satisfaction of blue-collar workers. In context of research, apart from many kinds of insurance, we want to recommend two forms of fringe benefits for workers in factories. First, bonus for Tet holiday is so meaningful, humane and extremely practical to the workers. In fact, Tet in Vietnam is the occasion for people to return home and stand by their families. Therefore, bonus for Tet will be the unforgettable gift with the workers that will give them a chance to enjoy traditional Tet holiday more entirely. Second, bonus in workers’ birthday should be considered according to the finance of each company. For example, today is the birthday of twenty workers in the factory, the company will give them roughly 30-minute break to celebrate the party and enjoy the birthday cake together. These are the most beautiful memories that take place in this company they will never forget.

Thirdly, company has to ensure the appropriate level of monthly income for workers, which bases on the labor market. The level of salary not only ensures the workers’ lives but it is also competitive in the current labor market and improves over the years. If that becomes true, the workers can suffer difficulties to work better and stabilize their personal lives.

Fourthly, supervision could help increase motivation of blue-collar workers through making their work more meaningful, providing more opportunities for rewards and giving immediate and equal recognition for their dedication. Although they are only blue-collar workers, the supervisor or manager must show them their importance to company. The company has to encourage workers to give their own thoughts and feedbacks about works as well as the ways that company manages them [40]. Listening, respecting, collecting and implementing the feedbacks will make the workers feel like they are being treated fairly and respectfully, thus they never quit the job without announcing in advance as workers in the other companies.

Lastly, although working condition does not show a high impact on job satisfaction as compare to the other factors, it is still important and necessary to be looked at by companies. Unlike white-collar workers where the workplace has to be clean, quiet even full air-conditioned, the safety of workplace is put in the first place with the blue-collar workers.

Moreover, the factories or industrial parks should have a good medical room to serve for workers if any unforeseen emergency arise. Besides, satisfactory space for working, suitable lighting, noise, and protective equipment also play an important role to ensure the workers perform their tasks well [42]. The companies must force the workers always wear protective clothing before and during performing work. It not only expresses the concern of company for the workers but also encourages them to devote themselves to the development of company.

## Appendix

No	Factors	Contents
1	<b>Career development opportunities</b>	I am aware of the advancement opportunities that exist in the company for me
		I have the necessary training to do my job
		I have the chance to increase my income
2	<b>Supervision</b>	My manager was aware of my perspectives and thoughts
		My manager always help to solve the problems of workers
		My manager was fair in checking performance of all workers (through timekeeping and reward)
		I am satisfied with managing ability of my manager
3	<b>Working Condition</b>	The working hours are suitable for me
		I'm happy with all the facilities provided by the company
		My workplace has enough equipment to ensure labor safety
		I am happy about the employment conditions in my organization
4	<b>Fringe Benefits</b>	I am satisfied with the company's representative welfare projects, for instance, rewards, motivations, sustenance coupons, protections, and so on.
		In addition to salary, I receive bonuses and allowances
		My company provides employees with additional benefits such as: payment for lunch, car, telephone and housing assistance
		I am satisfied with the recreational exercises of company, e.g. teambuilding and yearly party
5	<b>Salary</b>	I feel I am being paid a fair amount for the work I do
		The salary I receive is good, as other organizations pay to their employees
		The pay policy on my job is fair
6	<b>Job Satisfaction</b>	I am satisfied with career development opportunities of company
		I am satisfied with my supervisor
		I am satisfied with working condition in company
		I am satisfied with fringe benefits of company
		I am satisfied with my current income that the company gave
7	<b>Job Stress</b>	In general, I like working here
		I am often pressured when working overtime
		I am often disappointed or depressed with my work
		I am not calm and comfortable when I am working

		I feel the pressure of work interfere with my family or personal life
8	<b>Turnover Intention</b>	I have recently spent some times looking for another job
		During the next year I will probably look for a new job outside this company
		I often think about quitting job here
9	<b>Self-determined work motivation</b>	Because I have fun doing my job
		Because I enjoy this work very much
		I chose this job because it allows me to reach my life goals
		Because this job fits my personal values
		Because my work is my life and I don't want to fail
		Because this job affords me a certain standard of living
		I do this job for the paycheck

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# THE IMPACTS OF ASIAN HOSPITALITY ON THE SOURCES OF COMPETITIVE ADVANTAGES: THE CASE OF GREYHOUND CAFÉ

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## Abstract

This research has been conducted to pursue these two objectives: 1) to identify the sources of a competitive advantage possessed by Greyhound Café and 2) to explore the impacts created by Asian hospitality on such sources. To answer the research objectives purely qualitative research has been carried out, with the elite interview as the data collection method. The findings demonstrate that there are both positive and negative impacts created by Asian hospitality on Greyhound Café's sources of competitive advantages. These findings could function as a guideline for other restaurant operators in Thailand to fully exploit the positive impacts, and create preventive and corrective measures to deal with the negative impacts on each source of competitive advantages

**Keywords:** *Sources of a Competitive Advantage, Asian Hospitality, Greyhound Café*

## 1. Introduction

Thailand's restaurant industry has been identified as a fast-growing sector in the country's economy, with the increase in its GDP contribution ranging from +12.7% to 15.8% throughout the years of 2013-2016 (National Economic and Social Development Board (NESDB), 2016). The importance of food and restaurant industries is also echoed by the country's sobriquet of 'Kitchen of the World' being a leading producer and exporter of food to international markets (The Department of International Trade Promotion (DITP) , n.d.). Therefore, Thailand's role of the food producer, exporter and food service provider has increasingly become more important due to its high potential to serve both domestic and international markets.

Located in the Asia Pacific region, hiring the local Thai employees, and serving Thai and Asian customers, Thailand's restaurant industry, which is the food service provider industry, is inevitably affected by Asian influences. Thus, it is justifiable to assume that the influence of Asian hospitality playing a major role as a familiar approach deeply rooted the region's cultural background (Anh et al., 2013; Piuchan & Pang, 2015; Sucher, Pusiran, Dhevabanchachai, & Chon, 2013), could impact the operations, including the Thai restaurant's formation of competitive advantage in a certain manner and degree. Despite the importance of Thai restaurant industry in the country's economy and the possible relationship between its competitive advantage formation and Asian hospitality approach, there is an absence of research related to these two areas. This research project aims to cover this gap in the body of knowledge. As it is a novel and exploratory research of this specific area, the scope of this research is set to focus on an outstanding case of a Thai restaurant chain namely, Greyhound Café. The reason to select Greyhound Café is its long-term success lasting for 20 years since it's firstly establishment in 1998. Throughout the past 20 years, the growth in branch expansion both inside and outside Thailand has been unprecedented (Greyhound Café , n.d.). Until now, a set of international branches has expanded to Singapore and Indonesia. Therefore, the research aims of these investigations are as follows: 1) to explore the sources of the competitive advantage possessed by Greyhound Café and 2) to explore the impacts

created by Asian hospitality or Thai hospitality on Greyhound Café's sources of competitive advantages.

## **2. Literature review**

### *2.1 Definition of a competitive advantage*

According to Ireland, Hoskisson, and Hitt (2007, p. 17), competitive advantage refers to "ability of a firm to outperform its rivals". Similarly, Enz (2008, p. 74) cites the 1996 work of Porter, defining competitive advantage as the condition when "the firm can perform a service, manufacture a product, or offer a bundle of benefits that competitors cannot match". Possessing competitive advantage when competing in the marketplace tends to enable a firm to gain higher profit than being without any competitive advantage (Thompson, Strickland, & Gamble, 2008). To further explain the term, Porter (2004) proposes that competitive advantage is obtained through the lower price charged for the same benefit that the competitors can offer, or uniqueness being worth the higher price paid. Thus, competitive advantage is classified into these following two basic types: cost advantage and differentiation advantage (Porter, 2004).

### *2.2 Sources of competitive advantages*

Bharadwaj, Varadarajan, and Fahy (1993) explain that sources of a competitive advantage support a firm in achieving its competitive advantage through conducting value activities in either low cost creation direction or difference creation direction. Considering the types of the competitive advantage's resources, Ireland et al. (2007) suggests that the first type, which are tangible assets referring to visible and quantifiable assets classified into financial, organizational, physical and technological resources. The second type includes intangible resources or the assets that are cumulatively established over time along with the firm's history, and those are difficult to imitate. Intangible resources are categorized into human resources, innovation resources, and reputational resources. Another approach to grouping the competitive advantage's resources is suggested by Harrison and Enz (2005) who propose that five areas covering resources and capability are financial, physical, human, knowledge-based, and general organizational categories.

### *2.3 Relationship between Asian hospitality and Asian cultural elements*

Asian hospitality is the approach highlighting the importance of customer or guest, as supported by Wattanacharoensil, Kobkitpanichpol and Chon (2014, p. 15) citing the 2008 work of Heffernan and Droulers, and the 2010 work of Roll that being customer-centric is a focal point of Asian hospitality. Kolesnikov-Jessop (2010) also supports that the approach to arrange guests' stay provided by Asian hotel brands is more holistic, when being compared to Western brands, through the recognition of guests' details. Anh, Ho, Chen and Chon (2013) raise that the key for creating the high level of guest services, and guest satisfaction is referred to Asian employees taking care of guests.

To expand on the topic of the Asian employees or local staff, which is the key of Asian hospitality approach, their sensitivity and cultural background function as a tool to provide services (Piuchan & Pang, 2015). The nature of Asian people shaped by their cultural background is perceived as an asset used for enhancing the Asian hospitality approach on the global scale. Such characteristics as being detail-oriented, kind and giving, enables Asian employees to deliver unique services as well as satisfy the new century's guest demands (Sucher et al. 2013). According to Anh et al. (2013), an additional aspect of the Asian people's nature that supports the customer-centric concept is being outcome-based rather than being

task-oriented. Being outcome-based means Asian employees are likely to customize services matching guests' needs as well as create overall guest satisfaction, instead of being strict with following individual procedures.

Aside from having the Asian workforce of which nature is influenced by their Asian cultural background, the Asian hospitality approach embraces Asian social and cultural heritage, religious rituals and local resources into its service delivery and the creation of the home-like setting (Wan & Chon, 2010). Sucher et al. (2013) agree that the local history and culture are presented in the design of the Asian unique products and services. Piuchan and Pang (2015) cite Hobson (1994), Roll (2010), Wattanacharoensil et al. (2014) that the local characteristics of the Asian countries play a role in adding value to services and physical appearance of Asian hospitality operators. The aforementioned inclusion of the Asian characteristics into the offers helps Asian hospitality organizations become internationally recognized and distinguished.

To summarize the relationship between the Asian hospitality and the Asian cultural elements, the Asian cultural elements such as cultural background, cultural heritage, religious rituals and local resources shape the nature of Asian employees who deliver services with the Asian hospitality approach. Furthermore, such Asian cultural elements are used as components for the Asian operators adopting the Asian hospitality approach to create and deliver their bundle of offers. The previously summary is supported by Sucher et al. (2013), who state that the mixture of Asian religious and historical aspects forms Asian cultural values that influence the creation of the Asian hospitality's characteristics.

#### *2.4 Thai cultural values*

As previously stated, there is a relationship between the cultural elements and Asian hospitality approach. Thus, it is worth to introduce the relevant cultural values of Thai culture shaping the formation of the Asian hospitality applied in Thailand, and Thai hospitality which is adopted this research's context.

Hofstede and Hofstede (2005) demonstrate that Thai society possesses the low level of masculinity. Being influenced by the low degree of masculinity, Thai people tend to be humble in order to show their respect to other people. In addition, the smooth, pleasant, conflict-free manners are formed in an interaction by Thais (Komin, 1990). The aforementioned pleasant interaction results in 'Thai smile' and friendly atmosphere that create positive impression on foreigners. This concept of low level of masculinity also matches the Thai cultural value of 'Krang-jai' referring to the effort of not causing the discomfort or inconvenience to other people (Komin, 1990), as well as highly prioritizing other people's well-being (Andrews & Chompusri, 2013).

### **3. Methodology**

The main methodology applied is a purely qualitative approach to investigate the people's understanding of their ideas and experiences (Maggi & Major, 2013). Such approach fits the two research objectives. Since the study unit focuses on a single company in a current Thailand context, a case study strategy is chosen. In addition, the purpose of the case study in this research is exploratory, which is consistent with the research objective of exploring the competitive advantage's sources as well as the impacts of the Asian hospitality. For the data collection method, to gather insights on company's competitive advantage, its sources and influential factors are obtained from the internal company's process of annual strategic planning, the representatives of four departments participating in the annual strategic

planning have been requested to be interviewees in the ‘elite interview’ method (Gillham, 2000). All interviews were conducted in August 2016 and at least an hour was spent for each interview session that was tape-recorded. As to the data analysis process, the main method is a content analysis requiring the extraction and categorization of relevant content. This method yields the emerging themes from the previously mentioned categorization (Maggi & Major, 2013; Padgett, 2008).

## 4. Findings

### 4.1 Interviewees’ profiles

The four interviewees are the representatives in the executive or managerial positions being active in the four main departments contributing to company’s annual strategic planning. The summary of the interviewees’ profiles is provided in Table 1. Furthermore, to make each interviewee remain anonymous as requested by the interviewees, titles of Respondent 1-4 are assigned to each of them.

Table 1: Summary of the interviewees

<b>Respondent Numbers</b>	<b>Departments</b>	<b>Level of positions</b>
1	Sales and operations	Manager
2	International business	Executive
3	Marketing	Manager
4	Kitchen	Executive

### 4.2 Greyhound’s current sources of competitive advantages

#### 4.2.1 Brand image and concept

All four interviewees agree that the Greyhound’s brand value leads to the firm’s competitive advantages. The strong brand image has originally been created by the group of founders who have grown up in the social class leading modern, trendy lifestyle. Hence, they have been able to create the clear image of Greyhound’s brand, based on their own lifestyle (Respondent 1). The brand characteristics are perceived as a contemporary style relating to fashion, which is the first product line of Greyhound’s brand established before 1980. Such clear brand image can attract target customers who seek uniqueness or the ‘twist’ from their daily routine, regardless of their age (Respondent 3). The success of the brand image is reflected in the continuously high demand from customers as demonstrated in the long waiting lines throughout the 20 years of operation, the emerging copycats in the domestic market, and the ability to position the brand as the leading Food and Beverage brand in the international market (Respondent 1, 2 and 3).

To go into detail, the element making the brand image unique is the ‘Thai twist’, which refers to the different presentation of the traditional Thai dishes with the same core recipes used (Respondent 4). Such ‘Thai twist’ concept creates the Thai dishes that are hard to cook at home, e.g. Thai spicy salad innovatively made with Japanese beans instead of papaya but tasting similarly to the traditional Thai spicy salad (Respondent 3). Another strong brand theme is derived from a wide variety of foods provided in the domestic branches. While being under the main concept of ‘Thai twist’, Greyhound still adds more options with different kinds of dishes matching preferences of its trendy customers: ‘Italian-Thai twist’-ed

and ‘Vietnamese-Thai twist’-ed dishes. Therefore, Greyhound brand is perceived as the place for everyone in the family or the group of friends with diverse food preferences (Respondent 3 and 4). Such brand concept results in ‘the charm of Greyhound Café’ and its reputation as ‘the final answer for everyone’ (Respondent 1, 2 and 4)

#### *4.2.2 Ability to consistently produce food with high quality*

The ability to maintain the consistency of high food quality is raised by all four interviewees. Greyhound Café is considered to be a highly reputable business due to its delicious food, and this stems from the company’s belief that providing delicious food is the most sustainable way to remain as the long-term customers’ choice in the restaurant industry, instead of solely chasing the new emerging trends (Respondent 4). This source of competitive advantage is achieved by these following two factors: not compromising on the quality of the ingredients, and the effective quality control process. The ingredient quality is maintained by implementing the same standard established in the first operating year that has proven to encourage the high food quality (Respondent 4). Considering the quality control process, both domestic and international branches have frequently been checked in terms of their food and service quality by the company executives. In addition, the quality can be investigated through customer feedback on social media channels, such as Facebook, Wongnai.com (a Thai restaurant reviewing site), and Openrice.com (an International restaurant reviewing site) (Respondent 1, 2 and 3).

#### *4.2.3 Continuous adaptation to changes in the environment*

Since the Greyhound Café brand’s launch 20 years ago, the continuous adaptation to keeping it contemporary and avoid becoming outdated is stated by all the interviewees. The external factors that stimulate Greyhound’s adaptation are as follows: in the present days, it is easier for customers to gain travel experience, be exposed to new cuisines, and be able to create new trends by themselves, therefore restaurants that aim to consistently catch customers’ attention need to import or invent their own new offers (Respondent 2 and 4). Furthermore, competing with not only competitors but also the restaurant itself is necessary because this could encourage the restaurant’s constant development (Respondent 1). In order to adapt the brand to stay lively, the new menu or promotions are launched to demonstrate the brand’s dynamics, as well as outlet renovation and additional interior design updates (Respondent 1, 2 and 4). All adaptation approaches are based on the efforts to communicate in the preferred current communication style (Respondent 2). However, the degree of adaptation is kept consistent with the brand concept, as too much adaptation can make Greyhound lose its identity and thus discourage repeat customer visits (Respondent 1, 3 and 4).

#### *4.2.4 Ability to build and retain relationship with customers*

Two out of four interviewees commonly raise the management of customer relationships as a source of the competitive advantage. The selected approach to do so is launching the membership program yielding benefits, special privilege and personal touch to the members. This clearly reflects that Greyhound does not solely seek new customers but also puts a great effort in maintaining relationship with its frequent customers (Respondent 4).

#### *4.2.5 Ability to manage a franchise business*

The ability to manage a franchising business is shared as the common source of the competitive advantage by two out of four interviewees. It is shown that the franchisees in foreign countries, namely, Hong Kong, mainland China and Malaysia, possess their own unique cultural values and sensitivity. There are also some difficulties caused by the

differences in cultures, such as religious restrictions on consumption of certain kinds of food and beverages, sensitivity towards the brand logo of the Greyhound dog, and comparatively lower levels of friendliness provided by local servers. Greyhound is able to overcome those barriers through the willingness to understand each cultural uniqueness, and the ability to find the compromising solution fit each franchisee (Respondent 2). Furthermore, providing training packages at the workshop station of Greyhound can also alleviate the problems caused by the cultural differences. By doing so, the expected level of Greyhound's standards for food and services can be taught to the managerial level employees of each franchisee. In addition, the constant quality controls through branch visits, as well as social media monitoring activities performed by the franchisor are conducted frequently to ensure the quality consistency in the international branches (Respondent 1).

#### *4.2.6 Organizational culture*

According to Respondent 3, Greyhound Café has been seen as the workplace with the family-like working environment due to its origin as a group of friends establishing the company. Throughout the past 20 years, although there have been changes in the company's policies and systems to respond to the firm's growth, the family-like business culture has been kept in order to maintain the good corporate culture that has been proven to be appreciated by employees. Such corporate culture is illustrated in the special care for employees' well-being, competitive salary, and consistent annual bonus. This is echoed by the low staff turnover rate at the supervisory and managerial levels.

#### *4.2.7 Greyhound's own workshop station*

Respondent 4 suggests that having a workshop to train chefs and servers from both domestic and international branches resulted in the competitive advantage. Greyhound once collaborated with Dusit Thani College in Thailand to design its training curriculum. Dusit Thani College was responsible for the contents related to theories and international standards, while Greyhound played a major role in designing the contents on restaurant menus and cooking skills.

### *4.3 Potential sources of competitive advantage*

#### *4.3.1 Ability to deliver more interactive and friendly services*

Three out of four interviewees state that the ability to deliver more interactive and friendly services to customers is vital. Although the firm's average service score gained from the comment card method is rated satisfying (4.0-4.5 out of 5.0), higher score is expected to deliver the 'Wow' services to customers (Respondent 1). The discrepancy found in the expected service score and the actual score could be caused by the original brand concept of being Thai contemporary style influenced by Western culture. Hence, the serving style applied in an aristocratic place found in traditional Thai restaurants is not adopted by Greyhound. Instead, Greyhound intends to serve customers through more international approach which is professionally friendly with fewer Thai traditional serving steps (Respondent 2). However, Greyhound tries to increase the level of sincere friendliness in its service standards to respond to the expanded business scale serving larger variety of customers (Respondent 1).

#### *4.4 Impacts of Asian hospitality on Greyhound's sources of competitive advantages*

Asian hospitality in this investigation mainly refers to Thai hospitality reflecting specific location in which the Asian hospitality is adopted. The impacts of Asian hospitality or Thai hospitality in this research are studied in terms of how Thai cultural elements affect Greyhound's sources of its competitive advantage in both positive and negative ways.

##### *4.4.1 Positive impacts*

###### *1) Supporting local cultural background*

It is easier to train local Thai employees to serve well since such serving style is rooted in their usual behaviors (Respondent 1). The management of the company consider that the services provided by Thais tend to be more exceptional since in Thai culture there is a tradition to treat customers as their special persons (Respondent 4). The supporting role of Thai cultural elements is also illustrated in the inclusion of Thai serving manners into the employees' manual of service standards which are initially adopted from the international standards (Respondent 1).

###### *2) 'Thainess' as a unique brand image*

Since Greyhound positions itself as a modern Thai casual dining restaurant, rather than a traditional Thai restaurant, its competitors are all casual dining restaurants in the international markets. Thereby, it is important to differentiate Greyhound Café from other local casual dining restaurants, adding *Thainess* into Greyhound's bundle of dining experiences (Respondent 3). This leads to the extensive use of *Thainess* as the distinguishing brand image component when Greyhound Café is operating in foreign countries (Respondent 2). For the foreign markets, Greyhound embraces the contemporary Thai approach into various elements, i.e. selection of Thai dishes, Thai-inspired serving styles, interior design and creative twists in Thai menu's names. In terms of the Thai menu items, there is a reduction of non-Thai dishes, while higher proportion of the Thai menu items that matches the concept of 'Bangkok Café' is offered (Respondent 4). For the serving style, although in each country employees are recruited locally, the sense of Thai services approach need to be mixed in to an extent. The serving style that suit foreign markets is sincere friendly services combined with the international presentation of *Thainess* (Respondent 2 and 3). As to the interior design and menu's names, they are designed to stimulate customers and allow for them to emerge into the ambience of contemporary Bangkok, mixed with the lively atmosphere created by the *Thainess*-twist elements (Respondent 2).

In the domestic market, the strong *Thainess* is not the unique selling proposition. Rather, it is the contemporary lifestyle that creates a sellable brand image. However, Thai cultural elements still play a vital role in creating the 'Thai-twist'-ed menu to serve domestic customers. Greyhound believes that regardless of the menu's origin, Thai cooking style preferred by Thais needs to influence the taste of each dish. (Respondent 3).

##### *4.4.2 Negative impacts*

###### *1) Too Thai-oriented approach causing difficulty in transferring knowledge to the franchisees*

The internal working approach that is too Thai-oriented is suitable for Thai culture, e.g. too much compromising with regulations and lack of systematic management approach, but it cannot fully match foreign employees of the franchisees. This leads to the difficulty in knowledge transfer between the Thai franchisor and the foreign franchisees. Thus,

internationalizing the internal working process is required. By doing so, it is easier for the franchisees to accept and learn from the Thai franchisor (Respondent 2).

## 2) *Expectations for Thai traditional serving style*

In the domestic branches, the majority of customers are local Thais who are familiar with the traditional Thai serving style. Despite the strong contemporary Thai brand image, the local Thai customers tend to expect to get served in the traditional Thai serving approach. Such expectations have currently become more intense since the market of Greyhound's customers has expanded to include people that have more conservative lifestyle, the previous formal approach of keeping the distance between servers and customers need to be changed. This gap between the expectations of the current customers and the Greyhound's serving style negatively affect the strong brand image in terms of reputation (Respondent 1).

## 5. Discussion and implications

The two sources of competitive advantages which are positively impacted by Thai cultural elements are as follows: strong brand image and concept, as well as ability to deliver more interactive and friendly services. To group these sources, the typology of Ireland et al. (2007) is selected to be the main typology in this research due to its ability to categorize both tangible and intangible competitive advantage sources. The two sources are categorized into organizational resources (strong brand image), and human-based resources (ability to deliver more interactive and friendly services).

For the strong brand image and concept, the overall Thai culture or *Thainess* functions as a main ingredient distinguishing Greyhound brand from the casual dining providers in the international markets. The exploit of *Thainess* corresponds with the suggestion raised by Bharadwaj et al. (1993) that in the service industry in which it is risky to obtain the good quality, strong brand name and reputation makes the firm differentiate itself from its competitors, and lessen the customer's perceived risk related to quality. Hence, connecting Greyhound brand with Thailand's brand could result in the stronger image referring to the high quality of serving in gentle and friendly manners.

In light of its ability to deliver more interactive and friendly services, helpful cultural background yields the benefit in easier training process for local Thai employees. This is also compatible with the description of Thai people's personalities that due to the low level of masculinity shown in the Hofstede's cultural dimensions, Thai people tend to create the smooth, pleasant, conflict-free interaction (Komin, 1990), as well as consider other people (Andrews & Chompusri, 2013).

In terms of the sources of the competitive advantage that are negatively influenced by Thai cultural elements, the categorization of each source is as follows: general organizational resources (ability to manage a franchise business, and strong brand image and concept), as well as physical resources and value adding activities (ability to consistently produce food with high quality), according to the typology of Harrison and Enz (2005).

First, the ability to manage a franchise business is discouraged by the too Thai-oriented approach causing difficulty in transferring knowledge to the franchisees. As proposed by Piuchan and Pang (2015) cultural sensitivity and background of each Asian society are used as a tool to provide services by Asian employees. Hence, to successfully transfer the knowledge to the Asian employees residing in the franchisees' countries namely, Hong Kong, the mainland China and Malaysia, it is necessary to gain the acceptance from the learners. However, the too Thai-oriented approach with the lack of systematic management approach

could be perceived unprofessional and this discourages the willingness to learn the knowledge from the Thai franchisor. Thereby, adjusting the internal working process to be more international with a clear systematic management approach can facilitate the better knowledge transfer. Such adjustment is important for managing the franchisees which are considered a relevant stakeholder group because the difficulty in enhancing resources and capabilities to create a sustainable competitive advantage is caused by unsuccessful stakeholder management (Harrison & Enz, 2005).

In terms of the second source, the strong brand image and concept can be unfavorably impacted by the expectations for traditional Thai serving style by the local customers. The customers who shape their expectations towards Greyhound's serving style, based on their cultural background, can be dissatisfied and do not perceive the brand image positively due to the unmatched actual serving style with their expectation for Thai traditional serving style. Thus, this stimulates the management of Greyhound to incorporate more of traditional Thai serving style, i.e. sincere friendliness and interaction with customers, through training and motivating employees. However, in order not to lose the identity of contemporary Thai image, careful balance between these two approaches should be considered. Hence, the serving style of traditional *Thainess*, combined with more friendliness and interaction has recently been finalized and has increasingly implemented in the domestic branches. By continuously doing so, it is believed that with the constant high service quality, the finalized serving style of Greyhound will gradually reshape the expectations of local Thai customers to match the real brand concept of Greyhound. (Respondent 1).

According to the Respondent 3, the competitive advantage of Greyhound moves towards the direction of differentiation advantage, which is proposed by Porter (2004). The reason to go towards such direction is that lowering the cost does not allow Greyhound to deliver high quality of food which is the core business of the company. It is also clearly shown that all competitive advantage's sources affected by Thai cultural elements, namely, the strong brand image and concept, ability to deliver more interactive and friendly services, ability to manage a franchise business, as well as ability to consistently produce food with high quality, have the potential for creating the differentiation advantage for Greyhound instead of cost advantage. Hence, it is critical to fully exploit the positive impact of Thai cultural elements and lessen its negative impact on such sources of competitive advantage in order to drive Greyhound to be superior to its competitor in the firm's preferred direction.

It should also be noted that there is the need for internationalization when operating Greyhound Café outside Thailand. The two elements requiring internalization are the 'contemporary *Thainess*' and internal working approach in order to be more attractive to foreign markets, and gain acceptance as well as willingness to learn. Such internalization is consistent with the approach suggested by Sucher et al. (2013), that to enable Asian hospitality to become uniquely innovative, evolving and more global, it is essential to employ a more contemporary style of Asian spirit as well as the internationalization of the Asian 'DNA'. Hence, the internalization approach is seen suitable for position Greyhound brand to the international markets.

## **6. Conclusion**

The findings of this study reveal that there are seven sources of competitive advantages as follows: 1) brand image and concept, 2) ability to consistently produce food with high quality, 3) continuous adaptation, 4) ability to build and retain relationship with customers, 5) ability to manage a franchise business, 6) organizational culture, and 7) Greyhound's own workshop station. Furthermore, the impacts of Thai cultural elements have been explored as

an influential factor of Thai hospitality approach which is the specific type of Asian hospitality approach performed in the Greyhound's context. Hence, it is revealed that both positive and negative impacts are caused by Thai cultural elements, or Thai hospitality approach in a larger sense.

Considering the theoretical contribution given by this study, an evidence supporting the body of knowledge relating to Asian hospitality approach is created. The evidence gained from this research supports that for the case of a successful restaurant chain in Thailand, Greyhound Café, the definition of Asian hospitality relating to the impact of the local cultural background on the workforce (Anh et al., 2013; Piuchan & Pang, 2015; Sucher et al., 2013) is confirmed. Furthermore, the Asian hospitality definition of embracing the local cultural elements into the products and services (Piuchan & Pang, 2015; Sucher et al., 2013; Wan & Chon, 2010) is also valid in the case of Greyhound Café.

The practical contribution is a guideline for other Thai restaurant chains to identify the competitive advantages sources possibly affected by Thai cultural elements. By considering such guideline, it is feasible for other restaurant chains to initiate the effort to fully exploit the positive impacts of Thai cultural elements on the competitive advantage's sources, and to create the preventive and corrective measures to lessen the negative impacts created on the sources as previously reported.

The limitation of this research is caused by the nature of a single case study which yields the results from a specific successful company and cannot provide a holistic guideline covering a larger scope of the restaurant industry in Thailand. The future studies could overcome such limitation by increasing the number of cases derived from other Thai restaurant chains sharing the contemporary Thai style with the Greyhound's one. This could create a more holistic guideline for the Thai restaurant industry, with a larger number of possible affected competitive advantages' sources as well as the details of the cultural impacts.

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# IMPACT OF SOCIAL CAPITAL ON FIRM PERFORMANCE: THE CASE OF MANUFACTURING AND SERVICES FIRMS IN HO CHI MINH CITY

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## Abstracts

This study investigates how social capital in the forms of network ties, trust and shared vision affect knowledge transfer, how knowledge transfer then influence innovation and how innovation finally impact firm performance. With the past literature of social capital dimensions, knowledge transfer, innovation and financial performance, this study develops five hypotheses to be tested using structural equation modeling (SEM). A sample of 176 was selected from 113 different companies in Ho Chi Minh City (HCMC), using convenient and snowball sampling method, regardless of their industry and size. The results indicate that trust is positively associated with knowledge transfer, and innovation is positively related to firm performance with the mediator role of knowledge transfer. Academically, this papers offer an opportunity to further study of social capital with different factors in specific industries. Practically, this finding motivates firms to put emphasis on enhancing their social capital, especially trust to significantly increase their firm performance.

**Keywords:** *Social Capital, Network Ties, Trust, Shared Vision, Knowledge Transfer, Innovation, Firm Performance, Structural Equation Modeling.*

## 1. Introduction

Social capital is referred to as ‘the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit’ (Nahapiet & Ghoshal, 1998, p. 243). Social capital is increasingly seen as noteworthy and regarded by many as a source of valuable assets (Alder & Kwon, 2002). Organizations, for instance, can enhance its performances and competencies by relying on and synthesizing its members’ social capital resources (Van Wijk, Jansen, & Lyles, 2008). Reflecting on the mechanism of how social networks and capital work in East Asian societies, scholars such as Dalton, Pham and Ong (2002) revealed how families act as crucial central roles within networks and family ties remain as central network nodes for many individuals. In addition, not only does the process of social modernization not downplay traditional family-based networks, but rather expand them to integrate other networks in the fields of work and social groups. As an illustration, those who are well-educated or of a young age, are more likely to exposed to a range of dense social networks that are derived and extended from family networks (Dalton et al., 2002). In the age that markets continuously evolving and emerging, the issue of gaining and extracting social resources from social networks is becoming vital for private firms, especially small and medium-sized enterprises (SMEs) (Le Van, Nguyen & Simioni, 2018).

Given the context of developing markets like Ho Chi Minh City in Vietnam, it is increasingly relevant for firms to rely on their social capital since Asian markets are network-intensive (Hitt et al., 2002). Furthermore, utilizing social capital is also especially vital for small and medium-sized enterprises (SMEs) due to the fact that these firms are likely to operate in markets that are imperfect and corrupted (Le Van, Nguyen, Nguyen & Simioni, 2018).

Therefore, the current study attempted to contribute to the knowledge base by analyzing how social capital impacted on firm performance through the constructs of network ties, trust, and shared vision mediated by knowledge transfer and innovation. The sample of this research consists of firms in the sectors of manufacturing and service and trading.

### *Research questions*

This paper is guided by the following research questions:

1. What are the factors that may affect firm performance as perceived by the firm management?
2. How do the identified factors affect firm performance as perceived by the firm management?

## **2. Literature Review**

Although the concepts of social capital are vast and extensive, there are a majority of them that fall into two main branches: social networks (Burt, 1992), and the immersed resources within those networks (e.g. Bourdieu, 1986). Social capital theory is established with a proposition that social relations and their accompanying resources can be utilized to benefit individuals or collective groups. In terms of resources that enhance firms' competencies, scholars have pointed out that they are very much needed in an era of knowledge-based economy, especially surrounding environment are becoming more competitive and unstable (Subramaniam & Youndt, 2005; Teece, Pisano, & Shuen, 1997). In addition, the degree of a firm's success and competitiveness is greatly dictated by innovative capacities (Klomp & van Leeuwen, 2001; Prajogo, 2006) and knowledge-sharing mechanisms (Haak-Saheem, Darwish & Al-Nasser, 2016). Specifically, knowledge sharing behaviors are argued to contribute to various organizational capabilities including innovation, thus greatly affect firms' performances (Kogut & Zander, 1996). Moreover, innovation determines how firms can generate new ideas and processes, thus positively impact firms' learning and success rates (Hurley, Thomas, & Hult, 1998). Indeed, social capital lay a foundation for firms to gain access to competencies-enhancing resources that are beyond their reach in various ways: providing filtered and novel information set (Uzzi, 1997), aiding new innovation processes by providing essential information through network nodes (Burt, 1987), hinting information about potential employees (Burt, 1992; Fernandez, Castilla, & Moore, 2000). Looking through the lenses of economic benefits, social networks can help firms lessen transaction costs and acquire higher profitability levels (Appold, 1995; Billand, Bravard, Chakrabarty, & Sarangi, 2016; Dev, 2016; Fujita & Thisse, 2002; Sabel, 1989; Scott, 1988).

Moreover, the literature of social capital has much attention on information sharing and firm performance. Studies regarding how social networks affect outcomes have been based on specific learning mechanisms to propose theoretical explanations (e.g. Nahapiet & Ghoshal, 1998). However, the majority of them tend to link organizational outcomes with attributes of social capital, instead of social networks.

Regarding the field of social capital and knowledge transfer, many studies were conducted to analyze social capitals dimensions with sharing intention (Chow, 2008; Teo & Lee, 2010) or benefits of sharing (Maurer, Bartsch &, Ebers, 2011; Saha & Banerjee, 2015). Regarding the organizational outcomes studies, there has been a lot of researches concerning the relationship between trust and associates with organizational performances such as productivity growth (Helliwell, 1996), revenues (Jenssen & Greve, 2002), firm survival and profits (Bosma, Praag, Thurik & de Wit, 2004; Lou, Griffith, Liu & Shi, 2004) or

employment growth (Hanlon, 2001; Cantner & Stuetzer, 2010). Among the types of social capital that have been founded, “network ties”, “trust”, and “shared vision among network members” are argued to have influences on small firms’ performances by creating resources and information, developing knowledge and competencies (Andersson, Forsgren, & Holm, 2002; Gronum, Verreynne, & Kastle, 2012; Koka & Prescott, 2002; Kotabe, Martin, & Domot, 2003; Uzzi & Gillespie, 2002; Wu, 2008).

There are also studies researching about the impacts of social capital measurement on company innovation (Cook & Clifton, 2004; Cook, Hardin & Levi, 2005; Cook, 2007), market innovation (i.e., penetration of market segments, exploitation of territorial areas) (Chuang, 2005), product development (Damanpour & Evan, 1984; Salavou & Lioukas, 2003). Besides, many researchers found the relation of both innovation and firm performances (Dato-on, Banerjee & Roy, 2017; Gronum, Verreynne & Kastle, 2012) which are affected by dimensions of social capital, suggesting that innovators are more profitable than non-innovators (Love, Roper, & Du, 2009). However, there is little or no studies combined the effect of social capital on three factors namely intention to knowledge sharing, innovation and firm performances, especially in Vietnam. There are only studies carried mainly on the literature of social capital and its measurement (Le, 2007; Nguyen, 2013; Tran, 2006); or studies on the literature of social capital and firm performance (Tran, 2003); or studies of social capital, human capital and physical capital in general (Le Van, Nguyen & Simioni, 2018). At current, this matter has not been investigated toward firm performance with data analysis, not to mention the mediate role of knowledge transfer and innovation, especially in Vietnam. Moreover, in a global presence, Maurer et al. (2011) suggested a further research of social capital with mediating processes (relating to knowledge transfer or others) affecting other performance dimensions, such as financial performance (Dhanaraj, Lyles, Steensma, & Tihanyi, 2004).

In examining the role of network in deriving knowledge transfer and innovation and in translating effects of social capital on form performance, scholars have used different theories. The theories included the Theory of Social Capital (Coleman, 1988; Lin, 1999), Social Exchange Theory (Thibaut & Kelly, 1959), and Knowledge-based View Theory (Bontis, 2002; Grant, 1996a; Roos, 1998; Sveiby, 2001). More details are discussed below.

### *2.1 Social capital theory*

Social capital theory starts with a proposition that people expect to secure and yield future benefits by investing in social capital and allow others to access them (Lin, 1999). Historically, this branch of theory takes roots by reflecting upon the industrialization, democratization, and urbanization of America and the Europe in the 19<sup>th</sup> and 20<sup>th</sup> century. The emergent of social theory provides fundamental theoretical lenses to analyze the complementing relationships between social capital and firm performances and understand the underlying factors that affect and drive those relationships. In addition, economic benefits and returns of social capital have also been discussed on a continuous basis since small firms may not be able to achieve out of reach resources on their own networks. Therefore, cooperation and networking are believed to be vital and social capital theory is built upon this foundation of connecting networks. These networks can be characterized by shared norms by network members such as accepted behaviors and trusts, allowing network members to achieve shared goals and visions collectively. (Flora, 1998; Granovetter, 1983; Putnam 1995)

## *2.2 Social exchange theory*

The idea of this theory suggests that people engage in networking activities and support each other in order to gain future returns in the forms of tangible/ intangible resources, thus minimizing costs and maximizing profits/ benefits (Burns, 1973; Thibaut & Kelley, 1959). Another study by Nahapiet and Ghoshal in 1998 complemented the theory by suggesting that people's intentions to contribute knowledge towards social networks in order to achieve potential rewards from communities. In addition, social rewards such as reputation (Constant, Sproull, & Kiesler, 1996), efficiency, and other intrinsic/ extrinsic rewards (Thibaut & Kelley, 1959) might encourage individuals to participate in networking and interacting activities.

## *2.3 Knowledge-based view theory*

One branch of theory that can be considered as related to social network theories is the Knowledge-based View Theory (KBV). The KBV theory has been acknowledged as a recent extension of the Resource-based View (RBV) theory of firms (Bontis, 2002; Grant, 1996a; Sveiby, 2001). While the RBV focuses on tangible resources, the KBV explains how knowledge-based resources are fundamental to propel innovation, differentiation and accelerate sustainable firms' successes (Wiklund & Shepherd, 2003). Given the present context of dynamic, fast-changing and unstable environment, the KBV theory manage to bring into focus valuable intellectual resources such as knowledge (Barney, 2001; Eustace, 2000). It is those intellectual assets that lay foundations for firms' innovation capabilities (Subramaniam and Youndt, 2005), as innovation is considered as one of the most knowledge-intensive process (Nonaka and Takeuchi, 1995). Consequently, it is essential to recognize that social network and social capital provide the vital input for knowledge-sharing and innovation processes, thus fundamentally impact firms' innovation and performances (Diaz, Diaz, Perez, 2008).

## *2.4 Hypotheses Development*

Regarding structural dimension of social capital, network ties are a significant aspect of social capital since network ties bring up opportunities for social capital transaction (Adler and Kwon, 2002). Regarding cognitive dimension, this paper only measures the cognitive dimension with shared vision, which is the behavior resulting from comprehension the collectivity or power of consensus empowers mutual support. That is to say, shared vision evolves when individuals concur to common methods or tactics to get the desired results and when people have the willingness to invest in long-term relationship (Jarillo, 1988; Jarillo & Ricart, 1987). Among the facets of relational dimension, namely trust, norms, and identification, this paper focuses on trust, because of the limitation in space and because of its critical characteristic in affecting knowledge creation and transfer between firms (Dodgson, 1993).

The past literature of social capital, information sharing, innovation and firm performance has proved that knowledge sharing occurring in the form of networks can turn the power of social capital into firms' innovation performance, leading to concrete firm performance enhancement. Following the past researches of the influence of social capital on firm performance, this study used the financial measures concerning success, profitability and growth. Figure 1 presents the proposed research model of the study.

Literature has pointed out the correlation between social capital and knowledge transfer through a lot of studies (Van Mijk, Jansen & Lyles, 2008). Social capital is considered as a fundamental source for the generations of the inimitable value-creating resources which are

intrinsic within any firm's relationships' network (Gulati, Norhria, & Zaheer, 2000; McEvily & Zaheer 1999). It enables individuals and firms to gain from shared knowledge accumulated by close associates and networking partners (Hansen 1999; McEvily and Zaheer 1999; Uzzi and Lancaster 2003). Uzzi (1997) discovered that social embeddedness enables companies to interchange fine-grained information. Chow (2008) demonstrated the important impact of social capital dimensions such as social network, trust and shared goals on employees' sharing intention. Burt (1997) claimed that social capital allows brokering activities which transfer information from other actors to the focal ones. Social capital through network ties, trust and shared vision among the network members have been discovered to affect small firms' performance by creating resources, supplying information and knowledge and expanding new capabilities (Andersson, Forsgren & Holm, 2002; Gronum, Verreyne & Kastle, 2012; Koka & Prescott, 2002; Kotabe, Martin & Domot, 2003; Uzzi & Gillespie, 2002; Wu, 2008). With those arguments, this study expects that:

H1: Network ties are positively related to knowledge transfer

H2: Trust has positive impact on knowledge transfer

H3: Shared vision has positive impact on knowledge transfer

The literature of innovation has proved that knowledge transfer contributes a positive impact on innovation regarding products (Miller, Besser, & Malshe, 2007) and firms' processes (Roper, Du, & Love, 2008). The ability of knowledge transformation and exploitation of any firms may control the innovation levels of the firm, for instance new method of solving problems and new rapid reaction regarding products to the demand of market (Goh, 2002; Marina du, 2007; Tidd, Bessant & Pavitt, 2005). Knowledge transfer from one department of a firm to another department can prompt the evolution of new products, because it smoothens specialized knowledge resources integration and combination process (Smith, Collins, Christopher & Clark, 2005). As a result, knowledge transfer is able to have contribution of reallocating existing resources or combining new ones to create innovation results (Song, Droge, Hanvanich, & Calantone, 2005). Simultaneously, by intensifying the actors of knowledge base, knowledge transfer is able to lessen the delay and failure risk in the integration cycle (Yli-Renko, Autio, & Sapienza, 2001). With the above arguments, this study expects that:

H4: Knowledge transfer has positive impact on innovation

Given the present context of constant evolving and unpredictable environment, innovation is considered by many to be the driving force of strategic competitiveness and sustainable value (Bilton & Cummings, 2009; Subramaniam & Youndt, 2005). Consequently, bringing various aspects of innovation to light in order to understand its relationship with firm performances has been done gradually by many scholars (Clifton, Keast, Pickernell, & Senior, 2010; Jenny, 2005; Liao, Wang, Chuang, Shih, & Liu, 2010; Vaccaro, Parente, & Veloso, 2010). Not only does innovation leverage existing resources to drive efficiency, but it also likely to propel radical transformation that introduce new processes, mechanisms, or intangible assets (Wang et al., 2012). Firms that manage to achieve higher levels of innovation might be able to achieve a leap in performance or significantly increase their profit margins (Calantone, Cavusgil, & Zhao, 2002; Sadikoglu & Zehir, 2010). Overall, it can be considered that innovation is vital and positively impact organizational efficiency and quality (Hsueh & Tu, 2004; Parasuraman, 2010). On the basis of the mentioned arguments, this study expects that:

H5: Innovation has positive impact on firm performance

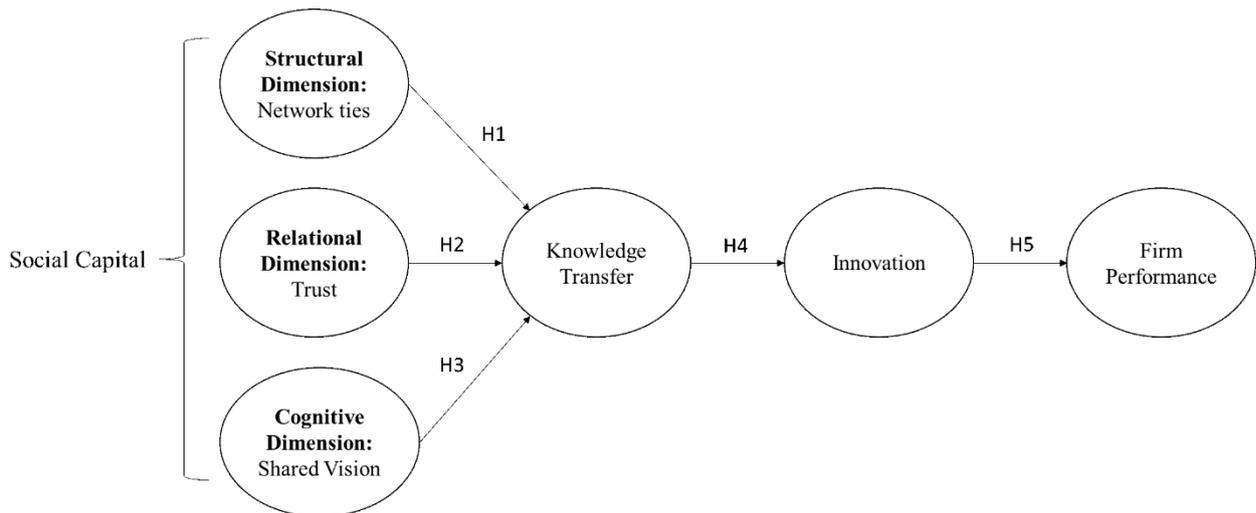


Figure 7: The proposed research model

(Source: Adapted from Saha & Banerjee, 2015; Dato-on et. al., 2017)

### 3. Study Design, Procedures and Data Collection

A cross-sectional design was used for this investigation. As one of the “most widely used designs in social research” (de Vaus, 2007, p. 176), this approach is ideal for describing and assessing attitudes and perceptions (Abbott & McKinney, 2013; de Vaus, 2007). Such a design also enables efficient and cost-effective collection of data (de Vaus, 2007; Salkind, 2010).

Prior to data collection, the questionnaire was developed to capture relationships between social capital and firm performance, based on previous empirical studies (Dato-on et al, 2017; Saha et al.,2015; Wang et al, 2012). The questionnaire was originally developed in English and then translated into Vietnamese. It was subsequently pretested by a small, representative group of respondents (n = 15) who were asked to fill it out and return it with their feedback (Hair, Bush, & Ortinau, 2002). The aim of the pretesting was to assess whether any items were difficult to answer due to sentence length, confidentiality, wording, or special terminology (Colton & Covert, 2007, p. 140). Pretesting also helped to improve construct validity (Shadish, Cook, & Campell, 2002).

The pretest results showed that some items need to be reworded for better understanding. As an illustration, several terminologies in the survey were confusing to the respondents, especially those terms in the networking section that indicate frequency and duration. Furthermore, narrow understanding regarding the network members was also an issue since respondents often deem network members only consist of colleagues and customers and skip a lot of important network nodes such as suppliers, business partners, etc. Thus, those terminologies that are proven to be confusing are noted with brief descriptions in order for participants to easily understand the survey as a whole. Building on the findings from the pretest, the research further modified the questionnaire to improve its readability and reliability before its use in the formal survey.

The study adopted a convenient sampling method (Trochim, 2002), and collected a sample of 176 respondents between October 15 and November 20, 2018. Respondents are firm managers and line managers from Sales and Marketing. A number of data collection employed face-to-face interview and online using google form are 114 and 62, respectively.

#### 4. Data Analysis

Out of 216 questionnaires delivered, 176 were received yielding a response rate of 81.5%. This high response rate reduced the possibility of response bias (Cheung, Gillen, Faucett, & Krause, 2006; Raheel & Naeem, 2013). Exploratory factor analysis (EFA) was conducted to identify the possible factors.

An SEM procedure was then utilized to examine the relationships between the constructs of social capital (i.e. network ties, trust and shared vision), knowledge transfer, innovation and firm performance. This SEM technique has been used by a growing number of researchers from various disciplines, especially in measuring the dimensions of social capital (Youssef, Haak-Saheem, & Youssef, 2017).

To derive an indicator of network tie, this study focused on the strength of ties which is similar to many other researches (i.e. Dato-on, 2017; Levin & Cross, 2004; Peper-Smith, 2006; Saha et al., 2015). The responses were tested about three items evaluating the perception of closeness of the relationship, the duration of network, and frequency of contact (Saha et al., 2015). Beside network ties, another variable taken to capture social capital is trust (i.e. the relational dimension). This construct's measurement comprises four items with two regarding enforceable trust and two regarding generalized trust to measure the perception of trust in the samples' companies and the insight of cooperation in networks (Miller et al., 2007; Portes & Sensenbrenner, 1993). Then, four items taken from Miller et al. (2007) concerning organizational commitment and personal socializing opportunity were used to measure the shared vision among members. Regarding innovation, there are 5 items mentioned innovation speed (Chen & Hambrick, 1995; Liao et al., 2010) and 5 items reflecting innovation quality (Haner, 2002; Lahiri, 2010). Finally, when it comes to firm performance, perception of business success, future profitability and future growth were adopted from past studies to measure firm performance (Danes, Stafford, Haynes & Amarapurkar, 2009; Sorenson, Goodpaster, Hedberg, & Yu, 2009). A table of measurement was attached in the Appendix

#### 5. Results

##### 5.1 Exploratory factor analysis

The research first tried to purify the instrument by removing items with low corrected item-to-total correlation values, and conducting exploratory factor analysis to delete items that did not load on a factor appropriately using maximum likelihood with Promax rotation. The finalized version of questionnaire consisted of 19 items (see Table 1), which correspond to four constructs including TRU (3 items), KNO (4 items), INO (10 items), IN (2 items).

Table 1: Finalized version of Questionnaire

Construct	Item
<b>Network Ties (NET)</b>	<ol style="list-style-type: none"> <li>1. How close are you with the members of the network? (1= very distant, 2 = distant, 3 = neutral, 4 = close, 5 = very close)</li> <li>2. How many years have the relationships been in existence? (1 = less than 1 year, 2 = 1–3 years, 3 = 4–6 years, 4 = 7–9 years, 5 = 10 or more years)</li> <li>3. On average, how frequently do you communicate with the members of the network in relation to business? (1 = once a year or less, 2 = six times a year, 3 = once a month, 4 = once a week, 5 = daily)</li> </ol>
<b>Trust (TRU)</b>	<ol style="list-style-type: none"> <li>1. I completely/ wholeheartedly trust the members within my networks.</li> <li>2. I believe that members within my networks will always keep their words.</li> </ol>

	3. I believe that members within my networks highly trust each other.
<b>Shared Visions (SHA)</b>	<ol style="list-style-type: none"> <li>1. I believe that members within the network hold the same ambitions and visions.</li> <li>2. I believe that members within the network care about the fate of others' business.</li> <li>3. Members expend resources regarding time, money, equipment or excess inventory to help each other.</li> <li>4. I believe that the network can provide opportunities for personal socializing.</li> </ol>
<b>Knowledge Transfer (KNO)</b>	<ol style="list-style-type: none"> <li>1. Members of my networks usually share official reports and documents to each other.</li> <li>2. Members of my networks usually share reports and documents that they prepare by themselves to each other.</li> <li>3. People in my networks frequently collect official reports and documents from each other for their work.</li> <li>4. Members of my networks are frequently encouraged by means of knowledge-sharing.</li> </ol>
<b>Innovation (INO)</b>	<ol style="list-style-type: none"> <li>1. Compared to key competitors, my company is quicker in coming up with novel ideas.</li> <li>2. My company is quicker in terms of new product launching compared to key competitors.</li> <li>3. My company is quicker in terms of new product development compared to key competitors.</li> <li>4. My company is quicker in terms of new processes compared to key competitors.</li> <li>5. My company is quicker in terms of problem-solving compared to key competitors.</li> <li>6. My company is better/ do a better job in coming up with novel ideas compared to key competitors.</li> <li>7. My company is better/ do a better job in new product launching compared to key competitors</li> <li>8. My company is better/ do a better job in new product development compared to key competitors</li> <li>9. My company is better/ do a better job in new processes compared to key competitors</li> <li>10. My company is better/ do a better job in problem-solving compared to key competitors</li> </ol>
<b>Firm Performance (FIN)</b>	<p>Has your business earned profits in the past 2-3 years?  (1 =not in the past 2-3 years, 2 =some of the past 2-3 years, 3 =most of the past 2-3 years, and 4 =all of the past 2-3 years)</p> <p>In case your company had profit in the past 2-3 years, how would you describe the trend of profit?  (1= slightly decline; 2= stable; 3= slightly increase; 4= significant increase)</p> <p>How would you generalize your company's market share in the past 2-3 years?  (1= slightly decline; 2= stable; 3= slightly increase; 4= significant increase)</p>

Source: Authors' synthesis.

## 5.2 Structural Equation Modeling

In order to assess the constructs, a confirmatory factor analysis (CFA) was conducted after running EFA (Table 2). As only trust satisfies the EFA test, a measurement model is built on trust, innovation, knowledge transfer and firm performance. Each construct showed good composite reliability of above 0.7 (Hair et al., 2010), and average variances extracted exceeding 0.5 (Fornell & Larcker, 1981). Also, the factor loadings for all of the indicators

were found significant of above 0.5 for convergent reliability (Hair et al., 2010). With the discriminant validity, both maximum shared variance and average shared variance of each indicator are smaller than its average variances extracted (Hair et al., 2010). As a result, the measurement models are confirmed to fit the data well.

*Table 2: Reliability and Convergent Validity of Measured Variables*

<b>Variables</b>	<b>Composite reliability</b>	<b>Average variances extracted</b>	<b>Maximum Shared Variance</b>	<b>Average Shared Variance</b>
Trust	0.874	0.699	0.338	0.207
Innovation	0.943	0.625	0.412	0.273
Knowledge Transfer	0.812	0.520	0.412	0.284
Financial Performance	0.795	0.661	0.192	0.121

Source: Authors' calculation

We next conducted hypothesis testing with the structural model shown in Figure 2. The goodness-of-fit indices demonstrated that the measurement model fits the data well. The ratio of chi-square test size and number of degrees of freedom [ $\chi^2/d.f.$ ] equals 2.14, which is considered good and the root mean square error of approximation [RMSEA] equals 0.08 considered moderate (Arbuckle, 2007; Hair et al., 2010; 2014; Ho, 2006). As the smaller RMR the better, 0.047 indicates a good fit (Arbuckle, 2007; Hair et al., 2010; 2014; Ho, 2006). Together with the traditional Tucker-Lewis Index of 0.914, we concluded that the model fits the data well.

Overall, our model was supported. The results showed that trust was positively associated with knowledge transfer (0.60,  $p < 0.001$ ), supporting H3. Moreover, knowledge transfer was proved to positively significant related to innovation (0.66,  $p < 0.001$ ), leading to support for H4. Finally, innovation was also discovered to have positive association with firm performance (0.44,  $p < 0.001$ ), supporting H5.

Taken as a whole, the results show that the proposed model allows understanding of how social capital dimensions affect firm performance. First, we found that the relational dimension of social capital, namely trust, affects knowledge transfer at an extensive degree. Second, the correlation between knowledge transfer and innovation is also very strong. Moreover, we noticed that the relation between innovation and firm performance is relatively significant.

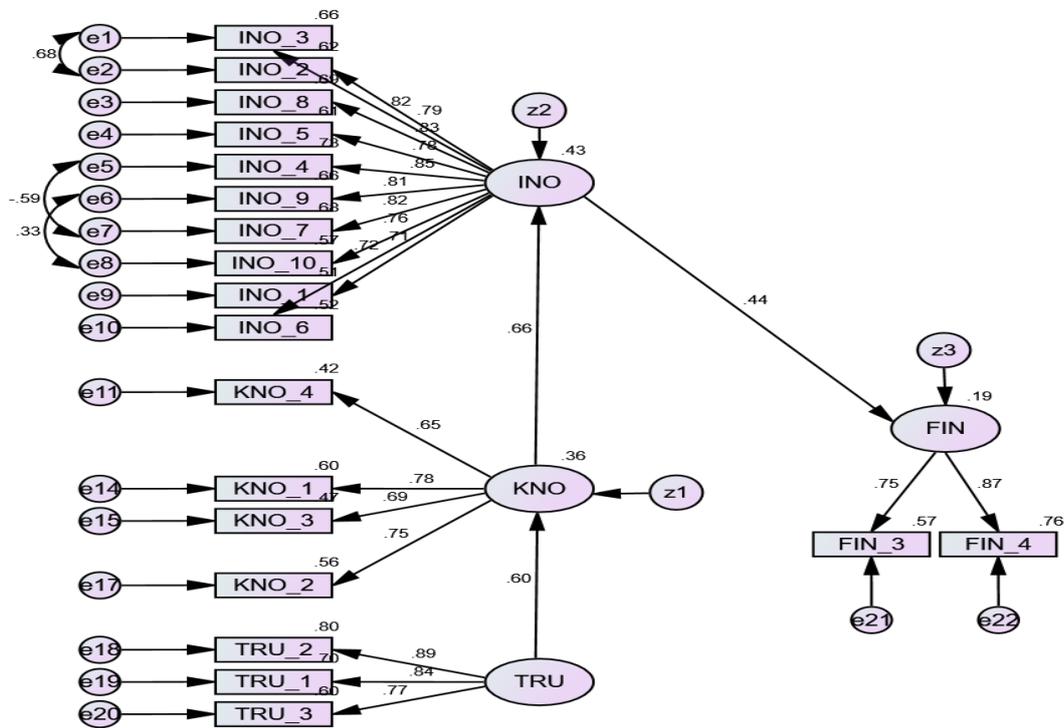


Figure 8: The final structural equation modeling results.

## 6. Conclusion and Discussion

This study investigated how the dimensions of social capital influenced knowledge transfer, whether and how knowledge transfer interacted with innovation, and how the relationship between innovation and firm performance was. For the purpose of this study, social capital, knowledge transfer and innovation were integrated into one model. And based on this model, five hypotheses were developed and analyzed using SEM. A valid sample of 176 respondents from 113 distinctive firms in Ho Chi Minh City was used to measure their opinions and beliefs. In order to obtain exact information, respondents were selected as managerial role or above to ensure their information access of knowledge transfer in the companies, their innovation and their performance. Therefore, the findings of this study offer those mentioned substantive contributions.

In conclusion, all of the results have statistical meaning towards the model. According to the result, the relational dimension of social capital (i.e. trust) was found to positively relate to firm performance with the mediation role of knowledge transfer and innovation. Although network ties (i.e. ties strength) or shared vision was expected to show their association, the results show that they were considered insignificant in influencing knowledge transfer directly and firm performance indirectly. Through effects analysis, a possible mechanism was provided by which trust influenced on knowledge sharing, which contributed to innovation and firm performance. The mediators' role of knowledge transfer and innovation are also confirmed. That is, trust will contribute to firm performance through the improvement of knowledge transfer, innovation speed and innovation quality. This result is similar to many other existing literatures showing that the significance of trust in the knowledge transfer

process was high (Davenport & Prusak, 1998; Hinds & Pfeffer, 2003; McNeish & Mann, 2010; Saha et al., 2015), and how later it influenced the organizational and financial performance (Nelson & Coopriider, 1996; Wang & Wang, 2008; Weber & Weber, 2007; Saha et al., 2015).

Another contribution of this study is that this study is the first research while there is no study combined the effect of social capital on three factors namely intention to knowledge sharing, innovation and firm performances, especially in Vietnam. Besides, Hitt, Lee and Yucel (2002) also stated that Asian companies are more competitive than Western ones because of its strong social capital. However, until now there are only studies carried mainly on the literature of social capital and its measurement (Le, 2007; Nguyen, 2013; Tran, 2006); or studies on the literature of social capital and firm performance (Tran, 2003); or studies of social capital, human capital and physical capital in general (Le Van, Nguyen & Simioni, 2018). At current, this matter has not been investigated toward firm performance with data analysis, not to mention the mediate role of knowledge transfer and innovation, especially in Vietnam. Moreover, in a global presence, Maurer et al. (2011) suggested a further research of social capital with mediating processes (relating to knowledge transfer or others) affecting other performance dimensions, such as financial performance (Dhanaraj, Lyles, Steensma, & Tihanyi, 2004).

## **7. Limitations and Further Research**

This study has a few certain limitations. First, there were only three social capital factors appearing in the model (i.e. network ties, trust and shared vision) while other factors may also affect the result (i.e. organizational culture, number of ties, network stability, etc.). Therefore, future studies may be conducted using other factors of social capital. Second, the data was limited to the area of Ho Chi Minh City- the South of Vietnam only. What holds true for Ho Chi Minh City may not be true for Ha Noi - the capital of Vietnam. As a result, there should be further research examining the whole country with a larger data sample to come up with generalized conclusion. Third, there is also inherent limitation of quantitative research that this study has to suffer from. The factors that appeared for different dimensions of social capital are by no means exhaustive. Those dimensions' operationalization may not have fully apprehended the variety in facets of each dimension. The limitation can be relatively omitted by incorporating qualitative data in further researches, which could be able to provide deeper network embeddedness understanding. Fourth, most of the studies concentrated on one specific industry while this study contains firms from different industries, which may affect the result at the conclusion. Future studies can be carried out with data of firms coming from the same industry. On the other hand, they can also concentrate on analyzing the difference between family firms and non-family ones. And the final limitation is that this study had been conducted in one region embedded in alike social and cultural context. Comparative studies may be conducted in various cultural contexts to investigate the effects of dimensions of social capital on knowledge transfer and firm performance as there are differences according to Hitt et al. (2002).

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## Appendix

1. Structural Dimension: Network Ties (Baer, 2010; Grantovetter, 1973; Gronum et al, 2012; Perry-Smith, 2006)	
<b>NET_1</b>	How close are you with the members of the network? 1= very distant, 2 = distant, 3 = neutral, 4 = close, 5 = very close
<b>NET_2</b>	How many years have the relationships been in existence? (1 = less than 1 year, 2 = 1–3 years, 3 = 4–6 years, 4 = 7–9 years, 5 = 10 or more years)

<b>NET_3</b>	On average, how frequently do you communicate with the members of the network in relation to business? (1 = once a year or less, 2 = six times a year, 3 = once a month, 4 = once a week, 5 = daily)
2. Relational Dimension: Trust (Miller et al., 2007; Portes & Sensenbrenner, 1993)	
<b>TRU_1</b>	I rely on the network members without fear.
<b>TRU_2</b>	I believe that people in my network will always keep their word.
<b>TRU_3</b>	I believe that there is a high level of trust between the network members.
<b>TRU_4</b>	Members in my network usually cooperate with each other.
3. Cognitive Dimension: Shared vision (Miller et al., 2007; Saha & Banerjee, 2015)	
<b>SHA_1</b>	I believe that members within the network hold the same ambitions and visions
<b>SHA_2</b>	I believe that members within the network care about the fate of others' business
<b>SHA_3</b>	Members expend resources in terms of time, money, equipment or excess inventory to help each other
<b>SHA_4</b>	I believe that the network can provide opportunities for personal socializing
4. Knowledge Transfer (Reychav & Weisberg, 2010; Liebowitz, 1999; Alavi & Leidner, 2001)	
<b>KNO_1</b>	People in my network frequently share existing reports and official documents with each other.
<b>KNO_2</b>	People in my network frequently share reports and official documents that they prepare by themselves with each other.
<b>KNO_3</b>	People in my network frequently collect reports and official documents from others in their work
<b>KNO_4</b>	People in my network are frequently encouraged by knowledge sharing mechanisms.
<b>KNO_5</b>	People in my network are frequently offered a variety of training and development programs.
<b>KNO_6</b>	People in my network are facilitated by IT systems invested for knowledge sharing.
5. Innovation (Chen & Hambrick, 1995; Haner, 2002; Lahiri, 2010; Liao et al., 2010)	
<b>INO_1</b>	Our organization is quick in coming up with novel ideas as compared to key competitors.
<b>INO_2</b>	Our organization is quick in new product launching as compared to key competitors.
<b>INO_3</b>	Our organization is quick in new product development as compared to key competitors.
<b>INO_4</b>	Our organization is quick in new processes as compared to key competitors.
<b>INO_5</b>	Our organization is quick in problem-solving as compared to key competitors.
<b>INO_6</b>	Our organization does better in coming up with novel ideas as compared to key competitors.
<b>INO_7</b>	Our organization does better in new product launching as compared to key competitors.
<b>INO_8</b>	Our organization does better in new product development as compared to key competitors.
<b>INO_9</b>	Our organization does better in processes improving as compared to key competitors.
<b>INO_10</b>	Our organization does better in management improving as compared to key competitors.

6. Non- Financial Firm Performance (Danes et al., 2009; Sorenson et al., 2009)	
<b>NFIN_1</b>	To the best of your knowledge, what has been the growth or decline of the industry in which your business operated in the last 2-3 years? 1 = decline more than 10%, 2 =decline 5% to 10%, 3 =stable, 4 =growth 5% to 10%, 5 =growth more than 10%
<b>NFIN_2</b>	Has your business earned profits in the past 2-3 years? 1 =not in the past 2-3 years, 2 =some of the past 2-3 years, 3 =most of the past 2-3 years, and 4 =all of the past 2-3 years
<b>NFIN_3</b>	If, on average, your business earned profits the past 2-3 years, how would you characterize the profits? 1 =declined somewhat, 2 =stayed about the same, 3 =increased somewhat, and 4 =increased significantly
<b>NFIN_4</b>	How would you characterize your market share in the past 2-3 years? 1 =market share has decreased, 2 =market share has stayed the same, 3 =market share has increased somewhat, and 4 =market share has increased significantly.

# GOOD FIRMS NURTURE GOOD SOCIETY: EVIDENCES FROM USA

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## **Abstract**

Corporate Social Responsibility (CSR) has received a great deal of the attention both in the media as well as in the academic literature. Extension from my prior fact finding about the positive relationship between firms CSR and future firms profitability (Withisuphakorn 2015), I argue that firms located in the same geographic location exhibit similar corporate community responsibility (CCR) because they are influenced by the same local factors, such as investor clientele, local competition, and social interactions. Our results strongly support this hypothesis. The degree of CCR of a given firm is influenced by the degrees of CCR of the surrounding firms in the same 3-digit zip code. Thus, firms take into account the policies of the neighboring firms when formulating their own CCR policies. Our study contributes to the literature by showing that geography is a relevant factor in determining CCR.

**Keywords:** *Corporate Social Responsibility, CSR, Corporate Community Responsibility (CCR), Community, Geography.*

## **1. Introduction**

The issue of corporate social responsibility (CSR) has received a great deal of the attention both in the media as well as in the academic literature. This is not surprising because corporations spend billions of dollars on CSR activities. A large number of investors also invest in mutual funds that trade based on CSR strategies. These funds command billions of dollars. In this paper, I explore one particular aspect of CSR, i.e. corporate community responsibility (CCR). Due to market segmentation, investor clienteles, social interactions, and local competition, I hypothesize that firms located in close proximity to one another tend to have similar CCR policies.

The idea of corporate isomorphism and peer pressures is not new. But, our study is the first to apply this concept to corporate community responsibility (CCR). Corporations that invest in CCR have strong incentives to publicize their CCR activities and make them as visible as they can because social spending is “akin to advertising” (Webb and Farmer, 1996; Dorfman and Steiner, 1954; Navarro, 1988; Sen and Bhattacharya, 2001; Milgrom and Roberts, 1986). Therefore, CCR activities are highly observable. I argue that the observable nature of CSR makes it likely that firms are influenced by their geographic peers when formulating their own CCR policy (Jiraporn, Jiraorn, Boeprasert, and Chang, 2014). Our results strongly confirm this argument. In particular, the empirical evidence shows that the degree of community responsibility of a given firm is significantly influenced by the average degree of community responsibility of the geographically-proximate firms. Our geographic identification is based on zip codes. In particular, firms situated in the same 3-digit zip code exhibit similar policies for community responsibility. The influence of the surrounding firms remains significant even after controlling for a number of firm characteristics such as firm size, leverage, profitability, R&D spending, capital expenditures, advertising, as well as possible variation over time and across industries.

## 2. Previous Research and Hypothesis Development

The central hypothesis of this study is that the degree of community responsibility of a firm is influenced by that of the geographically-proximate firms. Several arguments can be made in support this hypothesis. The first argument is based on geographic segmentation and investor clienteles. A large number of prior studies document that professional money managers and individual investors show preferences for geographically-proximate investments (Coval and Moskowitz, 1999; Ivkovic and Weisbenner, 2005; Zhu, 2002; and Massa and Simonov, 2006; Grinblatt and Keloharju, 2001). Local investors in different geographical locations likely exhibit different preferences for community responsibility. For instance, in an area where community problems are more severe, local investors probably expect the local firms (of which they are stockholders) to be more conscious of the community.<sup>1</sup> Hence, firms that are situated geographically close to each other are affected by the same local factors and preferences and should exhibit similarity in their community responsibility.

Second, local competition is expected to be a critical factor. Community responsibility is usually viewed positively by investors. How investors view a firm's community responsibility may depend in part on the policies of the neighboring firms. Investors may have a negative view of a firm if its community responsibility is much weaker than that of the surrounding firms. For this reason, when formulating its policy, a firm must take into consideration the policies of the surrounding firms. Local competition to attract investors forces the community responsibility policies of geographically-proximate firms to be similar. Third, social interactions and peer effects can be particularly important for corporate decision makers. Managers who work in the same geographic area usually have opportunities to network and build valuable relationships with their peers, exchanging ideas and learning from one another's experience (Pirinsky and Wang, 2010). The social interactions and peer effects of the executives in the same geographic area potentially make the community responsibility policies of the neighboring firms more similar.

## 3. Sample and data description

### 3.1 Sample Construction

Our CSR sample is from Kinder, Lydenberg, and Domini's (KLD's) database. The KLD database is the most widely recognized and reliable database in the CSR literature, being referenced by over 40 peer-reviewed articles. I obtain data on corporate headquarters location and other financial and accounting characteristics from COMPUSTAT. I classify firm geographic location by the 3-digit zip code. A 3-digit zip code is included if it has at least five corporate headquarters. Our sample consists of 8,943 observations from 1995-2007.

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<sup>1</sup> Consistent with this notion, Pirinsky and Wang (2010) argue that the local preference of investors naturally creates a clientele of investors from the same region, which could have an influence on major corporate policies. For example, a company that is headquartered in Boston would have a disproportionately large number of (local) institutional investors, which could affect its corporate financial policies.

### *3.2 Corporate community responsibility (CCR) score*

Prior research uses a number of alternative CSR measures. However, KLD is the most recognized and accepted in the literature.<sup>2</sup> KLD includes strength ratings and concern ratings for 13 dimensions; community, diversity, corporate governance, employee relations, environment, human rights, product, alcohol, gambling, firearms, military, tobacco, and nuclear power. KLD assigns strengths and concerns in the first 7 dimensions, whereas the final 6 dimensions are just exclusionary screens and firms can only register concerns in those categories. For instance, a company can receive credit for a strong environment policy at the same time a concern is registered for its environment record. I use the total of the community score as our measure of corporate community responsibility (CCR).

### *3.3 Firm Location*

The modern firm has fuzzy boundaries as its operations and management could encompass numerous countries around the globe. The academic literature usually defines a firm's location as the location of its corporate headquarters. Corporate headquarters are usually close to corporate core business activities. More importantly, corporate headquarters are the place where corporate decision makers reside and are the center of information exchanges between the firm and its suppliers, service providers, and investors (Davis and Henderson, 2008; Pirinsky and Wang, 2010).

In this study, I follow the literature and define a firm's location by the location of its headquarters. I identify the zip code of the headquarters location and classify firms as "geographically-proximate" if they are located in the same 3-digit zip code. This method of geographic identification has several advantages. First, zip codes are easily identifiable and have clear boundaries, facilitating geographic identification. Second, the zip code is determined by the U.S. Postal Service to maximize efficient mail delivery. Thus, it is unlikely related to corporate financial characteristics. Third, zip code changes are rare. The U.S. Postal Service does not modify zip codes based on corporate performance. For these reasons, a geographic location based on a zip code is likely exogenous.

### *3.4 Control Variables*

Based on prior literature, I include the following control variables in our regression analysis; firm size (ln of total assets), profitability (ROA), leverage (total debt/total assets), R&D (R&D/total assets), advertising (advertising/total assets), and dividends (dividends/total assets). Finally, I also include year dummies and industry dummies to control for variation over time and across industries. Our industry dummies are based on the first two digits of SIC.

### *3.5 Summary Statistics*

Table 1 summarizes the descriptive statistics. The average corporate community responsibility (CCR) score is 0.010, suggesting that the sample firms on average have slightly more community strengths than community concerns. The standard deviation for CCR is 0.515. Table 1 also shows the descriptive statistics for a number of firm characteristics such as total assets, ROA, leverage, R&D, advertising, and dividends.

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<sup>2</sup> Although there are other alternative measures of CSR, KLD is the most widely accepted. Other CSR measures can be found in Carroll (1991), Hansen and Wernerfelt (1989), and Waddock and Greves (1997).

## 4. Results

The regression results are shown in Table 2. The dependent variable is the corporate community responsibility (CCR) score. The independent variable of interest is the average CCR score of the surrounding firms in the same zip code. If a given firm's CR score is influenced by those of the surrounding firms, the coefficient of this variable should be positive and significant. I also include the control variables. In Model 1, the coefficient of the average CCR score is positive and highly significant, consistent with our hypothesis. The coefficients of the control variables are also consistent with our expectations. For instance, larger firms exhibit more community responsibility. Profitable firms are more responsible towards their community. Firms with more debt invest less in the community. It is also interesting to note that the coefficient of the advertising ratio is not significant, suggesting that corporate community responsibility may substitute for advertising. Although this issue is not the focus of our study, future research should further explore this substitution effect.

To avoid the impact of outliers, I use the median community score, instead of the average. In Model 2, the coefficient of the median community score is again positive and significant, confirming the previous result. Therefore, it can be concluded that firms located in the same geographical area tend to exhibit the same degree of community responsibility.

## 5. Conclusion

I focus on corporate community responsibility (CCR). I hypothesize that firms located close to one another tend to exhibit similar CCR, an effect probably due to investor clientele, local competition, and/or social interactions. Our results are consistent with this hypothesis. Firms located in the same 3-digit zip code share similar CCR. Our study contributes to the literature by showing that geography is a relevant factor for CCR as all local firms are influenced by the same local factors. Our study also shed lights on the determinants of CCR. I show that firms take into account the policies of the surrounding firms when formulating their own CCR policies. Our study is the first to link CCR to geography.

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## Appendix

Table 1: Summary statistics

	Mean	Median	S.D.	25 <sup>th</sup>	75 <sup>th</sup>
<b>Corporate Community Responsibility (CCR) Score</b>	0.010	0.000	0.515	0.000	0.000
<b>Total Assets</b>	6315	1081	29218	340	3539
<b>ROA</b>	0.159	0.050	0.217	0.009	0.092
<b>Total Debt/Total Assets</b>	0.210	0.170	0.229	0.010	0.320
<b>R&amp;D/Total Assets</b>	0.063	0.028	0.102	0.003	0.087
<b>Advertising/Total Assets</b>	0.106	0.000	1.989	0.000	0.000
<b>Dividends/Total Assets</b>	0.015	0.000	0.057	0.000	0.000

**Table 2: The geographic peer effect of corporate community responsibility (CCR)**

Dependent Variable	(1) Community Score	(2) Community Score
Constant	-1.009*** (-3.09)	-1.057*** (-2.85)
Average Community Score of the surrounding firms in the same zip code	0.912*** (15.77)	
Median Community Score of the surrounding firms in the same zip code		0.862*** (17.61)
Ln(Total Assets)	0.065*** (5.62)	0.074*** (5.89)
ROA	0.061** (2.29)	0.076*** (2.64)
Total Debt/Total Assets	-0.066* (-1.72)	-0.069* (-1.76)
R&D/Total Assets	0.320*** (3.36)	0.373*** (3.88)
Advertising/Total Assets	-0.000 (-0.08)	0.001 (0.85)
Dividends/Total Assets	0.285*** (2.73)	0.283** (2.55)
Industry Dummies	Yes	Yes
Year Dummies	Yes	Yes
R <sup>2</sup>	34.36%	28.72%

# DESIGN THINKING AS AN APPROACH TO TRANSFORM BUSINESS: A CASE STUDY OF TEACHING DESIGN THINKING AT NIDA BUSINESS SCHOOL

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## **Abstract**

The term “Design Thinking” has been increasingly used over decades and has been applied successfully in many fields. Can Design Thinking redesign the learning process and be embedded in the academic curriculum to generate innovations especially in thinking, strategizing, and approach business problems? This study presents a case study of implementing Design Thinking mindset and toolsets in the context of MIS projects along with the lessons learned from students enrolled in the MIS courses. The lessons learned from implementing Design Thinking practices helps students creatively and innovatively learn how to better understand the problems and expand the ideas to solve the problems.

**Keywords:** *Design Thinking, Prototyping, Decision Making, MIS.*

## **1. Introduction**

Design Thinking has been introduced as an innovative approach and a practice-oriented paradigm drawing attention from both researchers and practitioners over decades (Dolata & Schwabe, 2016, Brown, 2009). Design Thinking has been applied successfully in many fields such as new product development, process reengineering, and software development by encouraging “Thinking like a Designer” concept (Hildenbrand & Meyer, 2012; Kowark, Häger, Gehrler, & Krüger, 2014). The concept of Design Thinking is toward changing the mindset, conceptualized as a teaching methodology, to solve practical problems and to introduce new points of view (Dolata and Schwabe, 2016). The term “Design Thinking” has been increasingly used over decades.

The process consists of three to seven stages depending on the institutions exploiting the Design Thinking concept, with featured practices and activities at each stage, from understanding the needs of the users, providing solution-based approaches, and creating ideas from brainstorming sessions to prototyping and testing the proposed ideas and executing the best plan of action (Brown and Wyatt, 2010, Elsbach and Stigliani, 2018). In this study, we focus mainly on the principles and guidelines of Design Thinking proposed by the Hasso-Plattner Institute of Design (d.School) at Stanford where the author attended the Teaching and Learning Studio workshop from January 20-23, 2018 (For more information see <https://dschool.stanford.edu/university-innovation/faculty-workshops>). According to d.School, the five stages of the Design Thinking model are as follows:

### *1.1 Empathize*

The success of Design Thinking depends on the team’s efforts; thus, building the right open minded, multi-disciplinary and collaborative team is a requirement throughout the Design Thinking journey. Many projects are assigned to the team rather than to individuals. As a team-based work style, the first stage in the Design Thinking process is to understand the

people or users for whom you are designing and to gain an empathic view of the problem they are facing and would like to solve. It is important for the team to help observe the users' behavior, uncover their needs, experience their experiences and motivations, discover their emotions, and gain insights into users through participant interviews.

### *1.2 Define*

The Define stage starts by unpacking and synthesizing the empathy findings from the information gathered in the Empathize stage. The two main goals are 1 ) to define the core problems, scopes, and challenges, which help establish features and functions to solve the problems and 2 ) to come up with an actionable problem statement in the form of a point-of-view (POV) statement to uncover insights and understand the meaningful challenges, which are fundamental to creating a successful solution.

### *1.3 Ideate*

The Ideate stage aims to generate design alternatives by thinking outside the box, going beyond the known-obvious solutions through brainstorming, storyboards, mind maps, and idea clustering and selection. The Ideate stage helps increase the innovative potential of the solution set, using the concept of “free thinking and going wide” in order to explore a wide solution space in terms of a large quantity (volume) and diversity (variety) of ideas. Team members can often uncover unexpected areas of solutions, bring together perspectives and, consequently, investigate and test the collected ideas to solve the problem.

### *1.4 Prototype*

Developing a low-cost and scaled down prototype can help get ideas and explorations out of the Ideate stage, bridge the gap between gaining empathy, the design space, and the users during the pre-solution phase of the Design Thinking project. Inexpensive prototypes allow the team members to figure out the details, test assumptions, investigate different alternatives and possibilities, enlarge the solution space, identify the constraints based on the users' experiences, and get a better sense of how users think, feel, and interact with the developed prototype.

### *1.5 Test*

The final stage of Design Thinking is to get feedback on the solutions the team agreed on. Such feedback is very helpful for the next iterations of prototypes and consequently helps refine the solutions or the point-of-view (POV) statement in the Define stage. Another benefit most team members be appreciated is the opportunity to learn about the users and build empathy (Empathize stage) through observations and engagement while testing the prototypes, which often yields surprising results about the solutions the Design Thinking team came up with. Testing the prototypes helps answer the question of whether the team is doing (solving) things right and actually doing (solving) the right things.

Can Design Thinking redesign the learning process and be embedded in the academic curriculum to generate innovations especially in thinking, strategizing, and approach business problems? This study presents a case study of implementing Design Thinking mindset and toolsets in the context of MIS projects along with the lessons learned from

students enrolled in the MIS courses.

## **2. Design Thinking as an Approach for MIS Students**

During spring and summer 2018, students choosing MIS majors specializing in Business Analytics were required to take the following three courses:

- BA 7602: Business Intelligence and Analytics for Managers
- BA 7603: Big Data, Data Mining, and CRM Applications
- BA 7604: Management Science Methods for Firm Decision Making

In big data and data mining course, students are expected to use several data mining software to analyze real-world data and make strategic recommendations for managerial actions. The business intelligence course covers a comprehensive analysis of contemporary Business Intelligence (BI) tools and techniques used in managerial decision-making; meanwhile, the primary objective of management science course is to develop skills in quantitative modeling of business problems and opportunities encompassing a logical approach to problem solving.

All of students are MBA students, with different backgrounds in Finance, Accounting, Marketing, and Operations Management, interested in another MIS specialization. Thus, applying methods and mindsets of Design Thinking in the MIS projects is very challenging as, in each course, students are assigned to work on different term projects, which are designed to encourage students to advance their logical thinking, critical thinking, and analytical thinking skills.

### *2.1 Space on Campus*

Design Thinking has shown promises to promote innovation and creative ideas; thus, the design of classroom is likely to change from traditional lecture-based classroom to become more innovative and interdisciplinary teaching styles. As presented in Figures 1 and 2, the first and second iterations of Design Thinking Project were conducted in the auditorium-style classroom. Unfortunately, the class participation was under expectation. Any project discussion and group assignment were very awkward. Most of our classrooms were designed similarly to those from the Harvard Business School (Figure 3). Finally, the case study room as presented in the Figure 4 was selected with movable tables and chairs, writable whiteboard surfaces, and e-learning technology, allowing students to break into smaller groups for brainstorming, class discussion, and collaboration between faculty and students.

A space where I often teach

1. What is challenging about this space?

It's very difficult to interact with students, who often sit in the back of the room. Students always avoid sitting in the first and second rows; thus, sometimes I have to walk quite a distance to reach students for discussion.

2. What is endearing about this space?

Multiple whiteboards are very useful. The layout of the room is like an auditorium style and I can easily notice their faces especially when they do not understand the materials or are excited about topics I presented in class.

3. Sit where a student might sit and see this space with fresh eyes. What do you notice?

The layout of the room is like an auditorium style and students can see the projector/whiteboard clearly. When other students participate in any discussion with instructors, they can observe whom the instructor is interacting with.



*Figure 1: Evaluation of “Spaces on Campus” Collection Journey #1*



*Figure 2: Design Thinking and Case Study Classroom*

A space used to teach a discipline different from yours

1. How is this space different from the one in which you normally teach?

The layout of the room is like a three-level faculty meeting room with microphone and stations for laptop setup. No whiteboard!!!

2. How do instructors interact with students in this environment?

I need to walk to the center for the room to get attention from the students and it's quite challenging to keep track what students are doing when I stand in front of the room.

3. How do students interact with other students in this environment?

Students can push the button on the microphone if they have questions/answers. Unfortunately, only one student can participate at a time due to the way our microphone was setup. Students from the same batch always site on the same side.



Figure 3: Evaluation of “Spaces on Campus” Collection Journey #2

A space that is not currently used for teaching but could be;

1. Who owns the space? How is it used?

None. This picture is from Harvard Business School

2. Why this space? What brought you here?

Auditorium style with multiple chalk-board and the name tag right in front of each seat. Might be good for case discussion when I can use each chalkboard for different topics/points of view.

3. What are the behaviors you notice in the space? What are people doing?

The layout of the room is like an auditorium style and students can clearly see the chalk- board and instructors. When other students participate in any discussion with instructors, they can observe whom the instructor is interacting with.

4. If you were teaching in this space tomorrow, what would you teach and how?

I will use the room for the case study, stand in the middle room, use the middle chalkboard to outline the problem/scenario, the second (Middle) board for what I would like them to discuss, and the other boards for jotting down what students (key findings, issues) think/answers



Figure 4: Evaluation of “Spaces on Campus” Collection Journey #3

### 3. 10-Steps Design Thinking Process

#### Step #1: Conducting Interviews to Understand User Perspectives (Empathize Stage)

In each course, students are divided into smaller groups (maximum 5 students per group) working on assignment and course projects in which students are assumed to play a role as top management for each project. The main tasks are not only to utilize the data or improve the process using available tools, techniques, methodologies, and technologies, but also to suggest both short-term and long-term strategies for the top management. For instances, students assuming the role of the business analysts working on business analytics in “Big Data, Data Mining, and CRM Applications” course are required to interview their

classmates with open-ended questions to understand opinions and experiences their classmates are facing while working on the project.

*Step #2: Unpacking the key findings from the interviews and Creating a Point-of-View (POV) Statement (Define Stage)*

The next step is to unpack the key findings from the interview gathered from the “Empathize Stage.” Students create a Point-of-View (POV) statement in the following form (as examples) of questions.

- The 1<sup>st</sup> POV: We’d like to explore ways to help \_\_\_\_\_
- to \_\_\_\_\_ so that \_\_\_\_\_
- The 2<sup>nd</sup> POV: We’d like to explore ways to help \_\_\_\_\_
- to \_\_\_\_\_ in a way that makes his/her
- feel \_\_\_\_\_

Here are some examples:

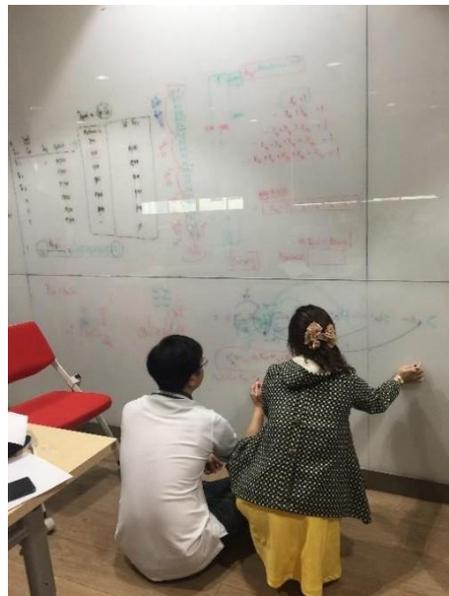
- We’d like to explore ways to help “a business analyst” to “utilize the data gathered from the shop-floor operations” so that “the defect rates can be reduced by 30%”
- We’d like to explore ways to help “a business analyst” to “build predictive models using data mining techniques” in a way that makes him feel “comfortable to promote preventive maintenance strategies to reduce defect in the production process”

*Step #3: Creating Mind Maps to Generate Opportunities and Finalizing the Ideas for the Solution Space (Ideate Stage)*

Students get together to create mind maps to pinpoint the area for problem-solving or improvement. As presented in Figure 5, students start brainstorming the ideas and steps to solve the problem. For instance, students work on a project with a plant manager for a company manufacturing optical receivers and transceivers to create the maintenance schedule for a machine in the production process. The annual maintenance costs, depending on the age of the machine, are gathered from the past 6 years. The plant manager can sell the machine and purchase the new one at the end of the year. The price of the new machine will increase at approximately 10% each year. As students perform a role as business analyst, they need to help the plant manager to develop maintenance schedule to minimize the cost of operation. Figure 6 presents the ideas students come up with after the brainstorming sessions.

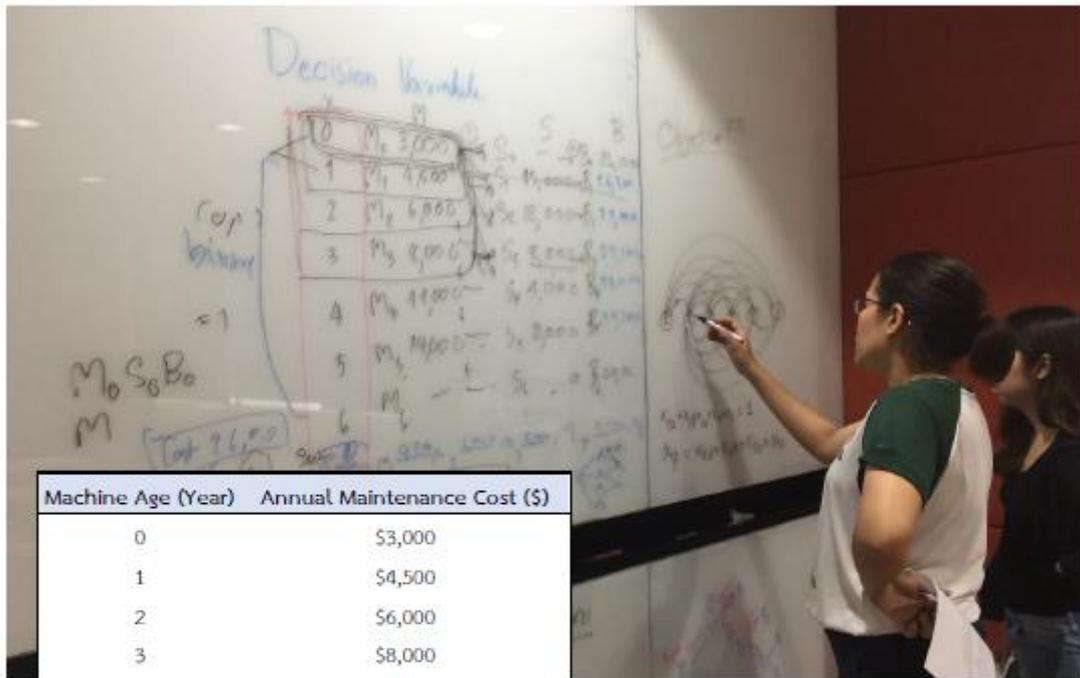
*Step #4: Carrying Out Some Forms of Prototyping (Prototype Stage)*

After the Ideate Session, students need to develop the rapid prototype to test their ideas of improvement. Any prototype using storyboards, sketches, or disposable paper-based models are welcome. However, since the term projects require a lot of statistical analysis to evaluate the current operations and to assess the new ideas on how to improve the process, students are encouraged to use discrete-event simulation software, called SIMIO Simulation Modeling (<https://www.simio.com/index.php>).



*Figure 5: Brainstorming the Idea for Process Improvement*

During this prototype stage, students can design and develop a model to imitate the current operation, turn the ideas of improvement into experiments, and, consequently, evaluate the ideas with various strategies. Figure 7 presents an example of SIMIO modeling once the process/operation flow has been studied based on participant observations and interviews, problems have been identified, areas of improvement have been brainstormed, and decision choices for improvement have been generated.



Machine Age (Year)	Annual Maintenance Cost (\$)
0	\$3,000
1	\$4,500
2	\$6,000
3	\$8,000
4	\$11,000
5	\$14,000
6	

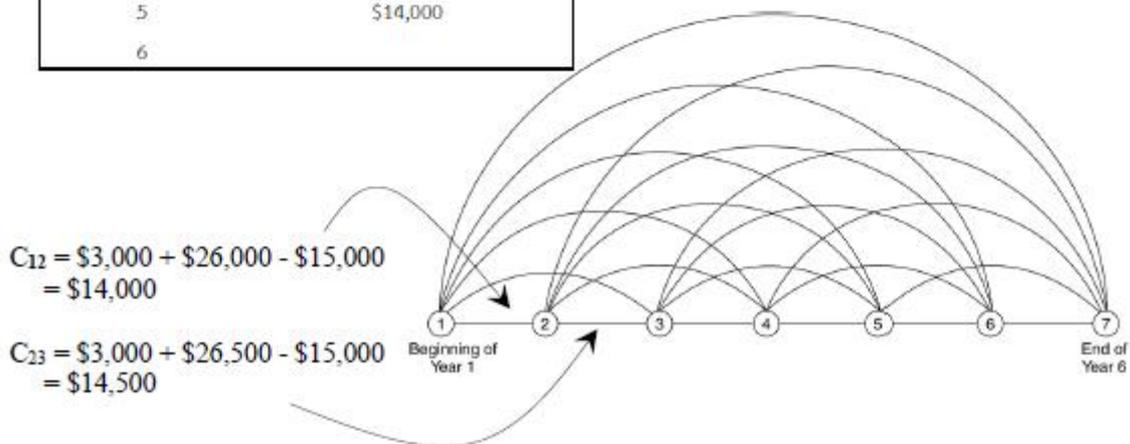


Figure 6: Ideate Stage for the Maintenance Scheduling Project

#### Step #5: Conducting a User Test (Test Stage)

At this stage, students are required to verify the model logic and model implementation with members of the other teams. The key findings are also validated based on the statistical analysis. The role play setting may be required to test the prototype. One of the advantages of SIMIO is how the tools can visualize the model logic, which is quite easy to follow. The feedback each team receives help shape up each stage of Design thinking process. They might understand stakeholders better after going through the process or figure out different creative and innovative ways to solve the problems or develop new prototypes.

#### 4. Conclusions

This study demonstrates a case study of integrating Design Thinking in the learning processes as a part of the MIS courses (Business Intelligence, Big Data, and Management Sciences). Both researchers and practitioners can benefit from applying the 5 steps of Design Thinking processes from understanding user perspectives (*Empathize Stage*), unpacking the key findings from the interviews and creating a Point-of-View (POV) statement (*Define Stage*), generating opportunities and finalizing the ideas for the solution space (*Ideate Stage*), carrying out some forms of prototyping (*Prototype Stage*), and conducting a user test (*Test Stage*).

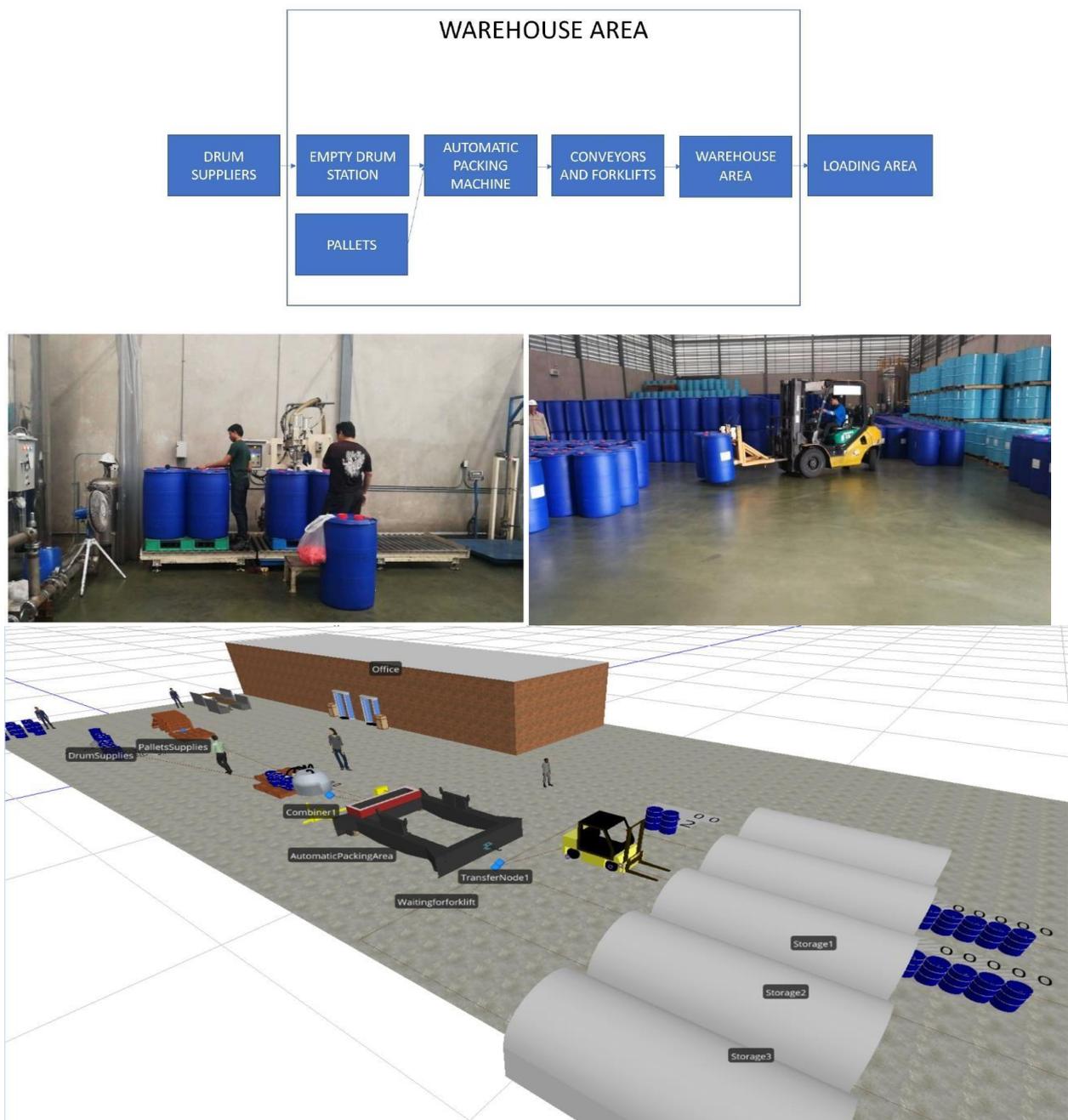


Figure 7: Rapid Prototype: Process Improvement – SIMIO Simulation Modeling

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# USING TAM-BASED APPROACH TO EXPLORE SHOPPING INTENTION VIA MOBILE APPLICATION AND ITS IMPACT ON PRICING SENSITIVITY: A CASE STUDY IN HO CHI MINH CITY

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## Abstract

In the age of technology, mobile shopping application has been viewed as a new paradigm and big future prospects in Vietnam. Understanding the factors influencing user's shopping intention and the nature of shopping intention - price sensitivity to create the best business strategy is very important to companies to encourage users to shop via mobile applications. However, this matter has not been formally exploited yet. For this purpose, this study is conducted to deeply investigate the level of the factors, including perceived ease of use, perceived usefulness, anxiety, trust and perceived innovativeness on online shopping intention. Furthermore, we explored the relationship between price sensitivity and online shopping intention on mobile applications. Finally, we offer several practical recommendations to impulse the purchase intention of potential consumers.

**Keywords:** *Online Shopping Intention, Mobile Shopping Applications, M-Commerce, Perceived Ease of Use, Perceived Usefulness, Anxiety, Price Value, Trust.*

## 1. Introduction

Undoubtedly, consumer's shopping behaviour has been substantially affected by the development of mobile devices (e.g., smartphones, tablets). This fact leads to the establishment of a whole new channel, namely m-commerce, where customers can be provided with more targeted offerings. To be more specific, consumers are getting more and more information from various sources related to prices, products, location and stores (Chopdar, Korfiatis, Sivakumar, & Lytras, 2018). According to Zhang, Zhu and Liu (2012), m-commerce refers to "an extension of e-commerce where business activities are performed in a wireless environment using mobile devices". Due to the popularity of smartphones and high-speed internet connection, many companies have shifted their focus of marketing and selling strategy toward m-commerce (Musa, Saidon, Harun, Adam, Dzahar, Haussain, & Lokman, 2016). Along with the development of m-commerce, the launching of mobile shopping applications has played an important role in multiple sectors. In Vietnam, numerous customized mobile shopping applications are being favoured by consumers such as Lazada<sup>3</sup>, Tiki.vn<sup>4</sup>, and Shopee<sup>5</sup>. According to free mobile applications ranking, Shopee and Lazada,

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<sup>3</sup> Lazada Group is a Southeast Asian e-commerce company founded by Rocket Internet in 2012, and owned by Alibaba Group.

<sup>4</sup> Tiki.vn is a Vietnamese e-commerce company in 2010 founded by T. N. Thai Son.

respectively, rank the 8th and 25th most downloaded mobile applications in Vietnam in IOS app store<sup>6</sup>. According to free mobile applications ranking, Shopee and Lazada, respectively, rank the 8th and 25th most downloaded mobile applications in Vietnam in IOS app store.

It is obvious that m-commerce is vastly growing; however, a significant body of literature believes that consumers can be less committed to make their actual purchases via mobile application as they worry about privacy and security. Instead, consumer shopping journey is completed on another medium having more trustworthy features. This controversial debate motivates this study to examine the adoption of m-shopping applications among Vietnamese consumers to identify a thorough understanding of various factors influencing their adoption and usage.

In addition, the findings of factors influencing shopping intention on mobile applications can benefit practical marketers by provide a deeper understanding in consuming behavior of m-shoppers. It is claimed that pricing policy is one of the most critical factors affecting success factors for a product, especially in developing countries where most of consumers consider price to make a purchase (Roy, Rabbanee, & Sharma, 2016). Due to the context of Vietnam - a developing country, price sensitivity is taken into consideration in this research to examine Vietnamese consumers' sensitivity toward price when they begin shopping via mobile applications. Now, price sensitivity in the field of technology acceptance has not been formally investigated in Vietnam.

Regarding the study of Davis and Fred (1989), technology acceptance model (TAM) can be used to explain the adoption of new information systems. Adapt from TAM model and several studies investigating m-commerce users' behavioural intention, this research aims to contribute to the knowledge base by puzzling out factors significantly affect shopping intention on mobile phones including six factors, namely perceived usefulness, perceived ease of use (Yang, 2005; Wu, & Wang, 2005), perceived innovativeness (Chopdar et al., 2018), trust and anxiety (Abu-Shamaa, & Abu-Shanab, 2015; Compeau, Higgins, & Huff, 1999).

This paper is guided by the following research questions:

1. What are determinants of online shopping intention on mobile applications?
2. How much does each factor affect the online shopping intention through mobile applications?
3. How does online shopping intention through mobile applications influence on price sensitivity?

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<sup>5</sup> Shopee is an e-commerce platform headquartered in Singapore under Sea Group (previously known as Garena), which was founded in 2009 by Forrest Li.

<sup>6</sup><https://www.similarweb.com/apps/top/google/store-rank/vn/all/top-free>.

## 2. Literature Review

### 2.1 Online Shopping Intention on Mobile Applications

Peterson, Bal Subramanian and Bronnenberg (1997) defined shopping as a process of purchasing products or services. Shopping is divided into two main types: physical store shopping and online shopping by Hsiao (2009). The study of Mokhtarian (2004) presented that online shopping or e-shopping is a searching and buying process for products and services through the Internet. Mobile application, or app, is a software program running on smartphones or tablets. It has an ability to provide information and services like websites. Within the development of E-commerce, the term - online shopping intention on mobile applications is defined as an individual online purchasing plan on mobile devices (Pavlou & Fygenon, 2006). The relationship between the consumers' shopping willingness and price sensitivity is studied by Munnukka (2008). Similarly to the intention used in the research model, the level of willingness to purchase is used to measure the customers' buying intention.

### 2.2 Price Sensitivity

Price refers to “consumers' cognitive trade-off between the perceived benefits of the applications and the monetary cost for using them” (Venkatesh, Thong, & Xu, 2012). Pricing is one of the most important elements affecting purchasing decisions, especially in developing countries where customers are concerned about price when selecting a product or service. With the change of the sales volume in differential price in m-commerce, it is necessary for measuring the price sensitivity of buyers. According to Natarajan, Balasubramanian and Kasilingam (2017), “Price sensitivity is bound to change with the intention of using mobile shopping applications and its actual use”. The prior study of Armstrong (2009) also considered pricing of products as a vital factor affecting the customers' purchasing behaviors. One of the main findings of Natarajan et al. (2017) was the negative effect of shopping intention on price sensitivity on mobile applications in India.

In this study, we hypothesized that:

*H1: Online shopping intention on mobile applications is negatively related to price sensitivity.*

### 2.3 Perceived Ease of Use

In 1989, Davis defined the term ease of use as “the degree to which a person believes that using a system would be free of effort”. Additionally, ease of use is mentioned as “the level of effort involved in learning to use a technological device properly”. In the term of m-commerce, Lu and Su (2009) proved that ease of use is related to the ease of access to the internet and easy of navigating shopping services' features and functions in terms of m-shopping (Grob, 2015).

Many prior studies, namely Venkatesh and Davis (2000), and Agrebi and Jallais (2015), have mentioned the effect of ease of use on intention in terms of mobile commerce. Notably, the study of David, Fred, Warshaw, Paul, Bagozzi and Richard (1992) found an important impact of perceived ease of use on predicting attitudes towards technology-based service (Davis et al., 1992). While Zhang et al. (2012) claimed technology using acceptant is predicted by ease

of use across different cultures and respondents. Hence, the more easy the users find the application is, the more chances users accept to use that application. Thus, it is hypothesized that:

*H2: Ease of use positively affects online shopping intention on mobile applications.*

#### *2.4 Perceived Usefulness*

Usefulness refers to “the degree to which a person believes that using a particular system would enhance his or her job performance”, including convenience, price comparisons, more choice, and greater offers (Davis, 1989). Perceived usefulness impacts on consumers’ belief whether it gains utility and effectiveness through mobile shopping services to conduct their online transactions (Faqih, 2016; Renny, Guritno, & Siringoringo, 2013). Other previous studies also mentioned the relationship between usefulness and online shopping intention with the help of mobile devices (Tsu Wei, Marthandan, Yee-Loong Chong, Ooi, & Arumugam, 2009). It is worth mention the study of Zhang et al. (2012) which proved a significant positive of usefulness on the m-commerce shopping intention. Therefore, the following hypothesis is conducted:

*H3: Usefulness positively affects online shopping intention on mobile applications.*

#### *2.5 Anxiety*

Compeau et al. (1999) defined anxiety as the negative emotions, such as fearfulness and worry. In the research conducted by Lu and Su (2009), related to information technology, anxiety includes the fearful and worry feelings when people using mobile shopping services. The study of Lee (2009) showed that there is an usual appearance of these negative emotions because of customers’ imaginations about possible problems, “including security problems, financial problems, social problems, time problems, and performance problems.” According to Igbaria and Iivari (1995), people having high levels of anxiety usually have behaviors more rigidly than ones whose level of anxiety is relatively low. The negative effect of anxiety on the information technology adoption was proved by the studies of Compeau et al. (1999) and McFarland and Hamilton, (2006). According to Park and Jun (2003), the study also showed the significances of the influence of anxiety on using intention in the field of m-commerce. From aforementioned papers, researchers strongly concurred with the negative relationship between the intention to use technology and anxiety. In addition, anxiety is a factor encouraging consumers to online shopping or anxiety influences negatively on shopping intention through online channels (Faqih, 2011). Therefore, we hypothesized that:

*H4: Anxiety negatively influences online shopping intention on mobile applications.*

#### *2.6 Trust*

With reference to Corritore et al. (2003), online trust concept was defined as the level of confidence in situation when meeting a risk on internet, being attacked or harmed unexpectedly. In e-commerce context, Grazioli and Jarvenpaa (2000) considered trust as a belief that suppliers have a willingness to gain the expectation of customers and to not do opportunistic behaviours, while opportunistic behaviour can be decreased by trust (Pavlou, 2003). When consumers do not believe in products or services provided in the internet, they are not willing to shop online (Park et al., 2012). It is notable that many previous studies

stated that the online trust positively affects the internet shopping intention of customers (Abu-Shama, & Abu-Shanab, 2015; Faqih, 2011). Especially, trust is proved to influence the online shopping intention via mobile applications of both existing customers and potential customers (Faqih, 2011). Thus, the hypothesis is proposed:

*H5: Trust positively affects online shopping intention on mobile applications.*

## 2.7 Perceived Innovativeness

Innovativeness was considered as “an idea, practice, or object perceived as new by an individual or other unit of adoption” (Rogers, 1983). In m-commerce, mobile shopping application is technological innovation by the improvements “through advantage, compatibility, complexity, trialability and observability.” Various research had been conducted to examine the degree of individuals’ innovativeness to adopt new technologies in the community. Namely, the study of Veblen (1967) found this behaviour depends much on consumers’ income. In other words, the higher income of the consumers, the more willingness to buy the newest material products. Besides, the positive effect of individuals’ innovativeness on shopping intention through mobile applications is discussed in many researches by Hung, Hwang and Hsieh, (2007); Zhang et al., (2012). Innovativeness persuades customers to experience new things, which encourages them want to become the first owners of products offered. Moreover, having the latest updated version can attract the envy for other consumers while lift up self-concept. Thus, the following hypothesis is proposed:

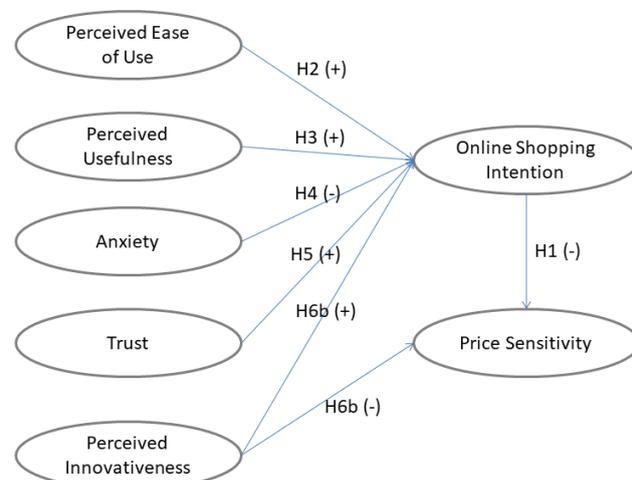
*H6a: Perceived Innovativeness positively affects online shopping intention through mobile applications*

With regard to Goldsmith, Kim, Flynn and Kim (2005), it exists either direct relationship between innovativeness and price sensitivity or indirect through the mediation of attitudinal brand loyalty (Goldsmith, 2012). Recently, vendors place the premium price for the products to upgrade them with new advantages, new functions to reach those customers having higher personal innovativeness, because they are willing to pay more to experience a new item. In the study conducted by Munnukka (2005), innovativeness significantly impacts on price sensitivity of mobile service customers. Hence, it is proposed that:

*H6b: Perceived Innovativeness has a negative effect on price sensitivity*

The proposed model was adapted from Natarajan et al. (2017). To build a new conceptual model, the research model added two impacts, namely anxiety (Lu, & Yu-Jen Su, 2009) and trust (Faqih, 2011).

*Figure 1: Research Model*



### 3. Data and Sample

Questionnaire was initially made by English, thereafter, was translated into Vietnamese which consists of five elements asking about the respondents' attitude, including totally agree, agree, neutral, disagree, totally disagree and about respondents' demographic. To be tested with realistic sample of main respondents to "make sure that the questions are trustworthy, easy to understand, easy to answer, convenient and attractive to the respondents and no confuse may happen"(Canava research, 2001), we applied Pilot test with the help of feedbacks from advisor and about 20 target respondents living in Ho Chi Minh City – who tested all questions in the questionnaire. The questionnaire of this study encompasses of 42 items divided 3 parts. Furthermore, the sample size of this study is about 400 samples which meet the requirement of Pallant (2005) to be at least five times the number of indicators. To collect enough data from respondents, we use online questionnaire by Google Form, then it will be posted via Facebook or Zalo to collect answers from main respondents who accessed the Internet.

Table 1: Measure scale of the research

Construct	Item	Measurement	Sources
Perceived Ease of Use	EOU1	Shopping using Mobile Applications does not require great mental effort	Davis (1989)  Moore and Benbasat (1991)
	EOU2	I think that I am able to shop using Mobile Shopping Applications without the help of an expert	
	EOU3	Learning to operate Mobile Shopping Applications is easy for me	
	EOU4	Overall, I believe that Mobile Shopping Applications are easy to use	
	EOU5	Working with Mobile Applications is not complicated; it is easy to understand what is going on	
Perceived Useful-ness	USE1	Mobile Shopping Applications will be useful in my life	Davis (1989)

	USE2	Using Mobile Shopping Applications will enable me to accomplish transactions more quickly	
	USE3	Using Mobile Shopping Applications will increase my productivity	
	USE3	Using Mobile Shopping Applications will enhance my effectiveness	
	USE5	Using Mobile Shopping Applications would enable me to accomplish shopping tasks faster	
Anxiety	ANX1	I feel apprehensive about using this mobile shopping application for purchase.	Meuter et al. (2003); Compeau et al. (1999)
	ANX2	It scares me to think that I could cause my mobile devices to destroy a large amount of information by hitting the wrong key when shopping online on this mobile application.	
	ANX3	Using this mobile shopping application is somewhat intimidating me	
	ANX4	I have avoided using this mobile shopping application because it is unfamiliar to me.	
Trust	TRU1	I feel safe in my transactions with this mobile shopping application.	Loiacono et al. (2002), Koufa

	TRU2	I trust this mobile shopping application to keep my personal information safe.	ris and Hampton-Sosa (2004), Pavlou (2003), Gefen et al. (2003).
	TRU3	I trust the administrators of this mobile shopping application will not misuse my personal information.	
	TRU4	I believe in the information this mobile shopping application provides.	
	TRU5	Based on my perception of this mobile shopping application, I know it is not opportunistic.	
Innova-tiveness	INN1	I think I know more about Mobile Shopping Applications than my circle of friends	(Goldsmith and Hofacker, 1991), (Agarwal and Prasad, 1998).
	INN2	If I heard about a new Mobile Shopping Application, I would look for ways to experiment with it	
	INN3	Among my peers, I am usually the first to try out new Mobile Shopping Applications	
	INN4	I like to experiment with new Mobile Shopping Applications	

	INN5	I think I would shop using Mobile Shopping Applications even if I did not know anyone who had done it before	
Online Shopping Intention on Mobile Applications	OSI1	Now I use Mobile Shopping Applications to buy products	(Kim et al., 2010), Davis (1989).
	OSI2	Assuming that I have access to Mobile Shopping Applications, I intend to use it	
	OSI3	I will strongly recommend this mobile shopping application to others.	
	OSI4	During the next six (6) months, I intend to use Mobile Shopping Applications .	
Price Sensitivity	PRI1	I don't mind paying more to buy a product through Mobile Shopping Applications. (Reverse)	(Goldsmith et al., 2005).
	PRI2	I am less willing to buy a product through this Mobile Shopping Application if I think that it will be higher in price.	
	PRI3	I know that buying a product through Mobile Shopping Applications is likely to be more expensive, but that doesn't matter to me. (Reverse)	

	PRI4	Buying a product through Mobile Shopping Applications is worth paying a lot of money for. (Reverse) *	
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By the survey conducted, 403 responses were collected through online channels, in which 11 unreliable answers were removed. 392 out of 403 responses (97%) were considered as valid. Unqualified responses were excluded as the rest 11 respondents either misunderstood reversed-scale questions or gave the same answers for all questions. The percentage of female’s accounts for the lion’s share (68.1%), women clearly have strong interest in shopping than men. “18-27 year olds” records by far the highest figure by 95.2%, who find easy to apply technology to their life. Student records the lion’s share with 74.7 percent and less than 5 million VND registers the single highest figure with 66.8 per cent. Given that students register the lion’s share having low income level (< 5 million VND).

#### 4. Data Analysis Method and the Measures

In the paper, the data used to analyse and check the research hypotheses is the primary data collected from survey. The Structural equation modeling (SEM) estimates multiple interrelated between mentioned dependent variables and independent ones, is applied in the paper (Hair et al., 1995). The statistical software tools used in this research were SPSS 20.0 and AMOS 20.0 to execute many a different testing. Firstly, this study applied Cronbach’s Alpha testing to check the reliability or the consistency in terms of a group of items in variables. Next, Exploratory Factor Analysis – EFA is conducted to attain the amount of factors that would give explanation on the maximum variance in the data. Through the value of significant level and Pearson Correlation index, testing relationships between independent variables and their dependent variables with the help of Confirmatory factor analysis. Then, we applied SEM analysis to estimate the fitness of the desire model. The data analysis results provided the conclusion and made some recommendations for research field and future study.

#### 5. Results

##### *Exploratory Factor Analysis (EFA)*

##### *5.1 Reliability Analysis*

The initial results of reliability analysis shows that the Cronbach’s alpha of almost items above are higher than 0.6. Remarkably, the Corrected Item-Total Correlation of the item PRI2 is lower than 0.3, we removed this item in order to the Cronbach’s alpha of Price Sensitivity reaches 8.29 (George and Mallery, 2003). The Cronbach’s alpha of Ease of use, Usefulness, Trust, Innovativeness, Online Shopping Intention and Price Sensitivity get excellent, being greater than 0.8 with 0.837, 0.832, 0.911, 0.849, 0.825 and 0.829 respectively. Therefore, it is not essential to delete any of these factors.

##### *5.2 Factor Analysis*

From the table, the items of 6 variables, namely Trust, Ease of Use, Innovativeness and

Usefulness, Online Shopping Intention and Price Sensitivity, were sorted into 4 columns and there is no item belonging different group. Besides, the item ANX1, ANX2 and ANX4 are loaded on two columns each, in which the item ANX4 was removed because the difference between 2 values of the item is 0.229 (<0.3) (Field, 2009). After eliminating the item ANX4, all items are acceptable. The KMO value records 0.874 (> 0.6) and the Bartlett test is significant (sig. = 0.000). In conclusion, the EFA is applicable. In the table, the statistic of “Cumulative Rotation Sums of Squared Loadings” records 66.569 per cent (> 50 per cent). Thus, 5 extracted components may explain 65.269% for 23 variables. Thus, EFA is appropriate.

### *5.3 Confirmatory Factor Analysis (CFA)*

From an overall perspective, most current fit indices satisfy the thresholds listed in the table. As can be seen from the result, the CMIN/DF = 2.088(< 3), CFI = 0.933 (> 0.09), TLI = 0.921 (> 0.9), SRMR = 0.066 (< 0.09) and RMSEA = 0.054 (< 0.06). In which, GFI = 0.877 (>0.8) is considered as sometimes permissible (Pire, 2007). The model fit is still good enough with 5 out of 6 current fit indices, being well- accepted.

### *5.4 Convergent Validity*

All P-values in table 29 are denoted by \*\*\*, that means they are smaller than the 0.05. From the next table, the statistics of standardized regression weights are higher than 0.5, being accepted.

### *5.5 Reliability*

To meet the condition of CR, the reliability of overall study had not to be lower than 0.7. The formulas of CR (Joreskog, 1971) and AVE (Fornell & Larcker, 1981) were used in this case. Overall, both the Statistics of Standardized Regression Weights and values of AVEs are greater than 0.5. Additionally, the results of CR testing are qualified because the figures of CR are higher than 0.7. Thus, the factors have reliability and the measurement model have convergent validity. The result shows that all AVEs of the constructs are greater than r<sup>2</sup> in each correlation. Therefore, the discriminant validity is ensured

### *5.6 Structural Equation Modeling (SEM)*

In the first round running SEM, P-value of the tested relationships are significant, except the relationship between ANX (Anxiety) and OSI (Online Shopping Intention), being 0.209 (>0.05). From the results of next round, we ran final SEM testing without checking the relationships between Innovativeness and Ease of Use and between Online Shopping Intention and Price Sensitivity (p-value of OSI -> PRI is 0.07 (>0.05)). All the relationships in the SEM are significant (the P-values are below 0.05) in final round. Therefore, the shown relationships between variables are significant.

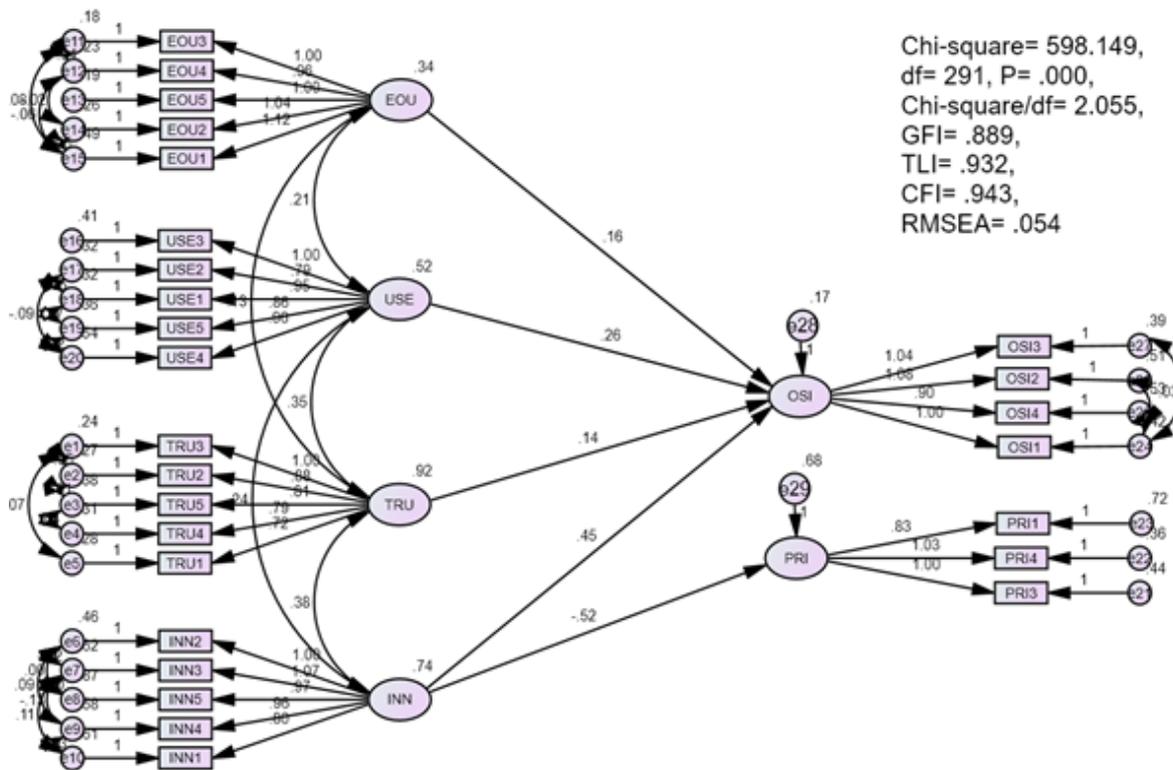


Figure 2: Measurement standardized modelling”

### 5.7 Hypotheses Testing

Table 2: Supported Hypotheses Testing In SEM

	Causal Path	The SEM Result	
		Estimate	Test Result
H2	Ease of Use -> Online Shopping Intention	0.125	Supported
H3	Usefulness -> Online Shopping Intention	0.259	Supported
H5	Trust -> Online Shopping Intention	0.180	Supported
H6a	Innovativeness -> Online Shopping Intention	0.527	Supported
H6b	Innovativeness -> Price Sensitivity	-0.476	Supported

## 6. Conclusion and Discussion

Innovativeness is considered as the most important impact on engaging shopping intention of customers through mobile applications (52.7%) and plays a significant role to reduce the customer’s price sensitivity (47.6%). The innovation helps vendors providing mobile shopping applications gain more profit by both gaining larger volume sales and offering the higher price than normal. So, providers should launch new versions, new products and services on mobile applications to impulse buying decision and to reduce price sensitivity of innovative customers.

Next, usefulness positively influences online shopping intention on mobile applications with

the level of impact being 25.9%, which reveals that the using intention on mobile applications depends on the ability to make their work better of these applications bringing for user. Users will refer to use the mobile shopping application if it enables them to increase my productivity, accomplish transactions more quickly and improve their ability to make good purchase decisions. Thus, providers' mobile shopping applications should build the version with convenience, price comparisons, more choices, and greater offers to enhance buyers' performance.

Additionally, the positive level effect of trust on online shopping intention through mobile applications is 18.0 per cent. A mobile shopping application focuses on consolidating the customers' belief, may encourage them to use and buy items on these apps. To more details, the information, the mobile shopping application provides, should be accurate, the details and images of product on the app for example. Moreover, the users' personal information or payment transactions must be safely kept, are not used as the profitable purpose, except customers' shopping purpose.

Last but not least, the level of impact ease of use on online shopping intention records 12.5%. The providers should program a mobile application with friendly and familiar display to be ease to use for customers. In Vietnam market, mobile applications has not been popular, ease of use is a determinant to raise the awareness of consumers in the using mobile applications. In addition, the mobile applications are necessary to have an guide book or a "help" button to response any questions of customers during experience time. Therefore, this way helps users become skillful and familiar with those mobile applications.

## **7. Limitations and Further Research Avenues**

The researchers acknowledge several limitations. Firstly, the fact that most of the respondents are students having low income may lead to bias outcomes. Besides, as the questionnaire was delivered to people living in Ho Chi Minh City only, the result cannot represent the whole population. However, we cannot deny the fact that Ho Chi Minh City is a potential sample setting to understand Vietnamese behaviour as it is one of the biggest cities in Vietnam and attracts a lot of people from various backgrounds.

Based on these limitations, the future research could contribute to the literature by expand sample size throughout Vietnam. Secondly, researchers can take into consideration other factors which might impact on shopping intention such as price value of goods or perceived enjoyment when using mobile application.

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# FACTORS EFFECT OF ELECTRONIC WORD OF MOUTH ON A HOTEL BOOKING INTENTION VIA SMARTPHONES: A CASE STUDY OF PEOPLE LIVING IN BANGKOK, THAILAND

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## **Abstract**

Electronic word of mouth by customers leads to hotel booking intention. Travelers read comments and made a choice based on those comments. The research aims to study factors effect of electronic word of mouth on a hotel booking intention via smartphones. The research hypotheses study the effect electronic word of mouth toward perceived behavioral control, perceived benefits, subjective norm and attitude toward a hotel booking intention via smartphones. The paper examines difference among genders and the model tested collecting from online of 400 respondents living in Bangkok. Measuring the travelers' behavioral, attitude by using SLR, MLR and independent sample T-Test. Customers want to be known about complaints and compliments in online comments. This research will help hoteliers to obtain an understanding of what guests' needs.

**Keywords:** *Electronic Word of Mouth, Hotel Booking, E-Comments, Online Booking, Intention to Use, Thailand.*

## **1. Introduction**

Hoteliers and travelers use travel online comments to measure the level of customer satisfaction with the amenities. According to (Zheng, 2009), the performance of services is depended on customer's satisfaction. Thus, hotel managers have to be aware of comments because the internet has enabled guests by offering easily accessible information (Kotler, 1999).

The important of approaching customer comments is to preserve customer satisfaction and provide loyal customers (Holloway and Beatty, 2003). The important of comments in assisting hotel investors is to understand strengths and weaknesses of offered services (Au, 2010). However, from the customers' point of view, word of mouth (WOM) can also affect their processing judgments (Brown, 2007) and majority of customers therefore seeking WOM as an objective source of information and trust in them (Litvin, 2008).

Electronic word of mouth (eWOM) influences the decision making process of customers from the previous customers (Xie, 2011), with product evaluation and trust (Filieri, 2016), hotel booking intentions and attitudes (Ladhari and Michuad, 2015) and purchase decisions (Mauri and Minazzi, 2013). Consequently, eWOM helps companies to increase competitive advantage over the rivals (Serra and Salvi, 2014) to improve business performance (Kim, 2016) such as room sales (Ye, 2009) and hotel occupancy rate (Viglia, 2016) and to boost corporate reputation ((Loureiro and Kastenholz, 2011).

Bangkok online users are traveling planning or purchase intention from different aspects. For instance, Bangkok online users using travel online website or application for planning and

travel experience sharing, considering the different among demographic groups. There is a considerable increase in percentage of online website or application users, and conclude that the perceptions and behaviors change rapidly throughout the years.

In addition, with the new generation, new technology has emerged expressing opinions and attitude felt during service encounters. TripAdvisor, Booking.com and Agoda are some specific examples but, in general terms, all online travel agencies (Expedia, Hotels.com, etc.) comprise customer opinions about their previous experiences. It is the electronic word-of-mouth (eWOM), consumer-to-consumer information in form of opinions and reviews. Within tourism services in general, particularly in the hospitality industry, eWOM is of major importance one.

## **2. Literature Review**

### *2.1 Electronic Word of Mouth (E-WOM)*

Electronic word of mouth (eWOM) conversation is both a positive or negative statement made by customer which available on social media or internet. eWOM remains over the period including blogs, online reviews, social media post and messages posted on online groups (Hennig-Thurau, 2004). eWOM provides wider and more over various sources for online information seeker with positive and negative information as compared to traditional WOM. Moreover, customer with high standard level of interest concerning on a product topic as compared to market generated source, if they collected the information themselves through online discussion (Bickart, 2001). eWOM have influence towards customer attitude concerning on a brand as compared to other significance sources (Godes, 2004).

Customers believed that online recommendations from other customers are more reliable as compared to information generated by expertise. Furthermore, eWOM has proven to the customers when they make decisions and choices for hotel products and services that it is important reference information within the hotel industry (Huang, 2006).

### *2.2 Perceived Behavioral Control*

Perceived behavioral control is started from self-efficacy. It is dictated by the total set accessible control beliefs. In particular, the quality of each control belief is weighted by the perceived power of the control factor, and the product aggregated. Furthermore, perceived behavioral control consists of two different factors namely believe of control and perceived facilitation. In order to reach a desired outcome, it is the importance an individual place towards the self-availability of skills, resources and opportunities, believe of controls are individual's belief (Goh, Ho, Jiang, 2015). According to (Pavlov, 57), perceived behavioral control has turned out to be significant indicator of intention towards purchasing a product to obtain information from a web vendor. Besides, earlier researchers conducted by (Lam, 2006) had shown that perceived behavioral control indicated an important construct in the prediction of consumer's intention towards visiting a tourist destination. Moreover, (Mathieson, 2004) expresses that perceived behavioral control fundamentally affects consumers' expectation to use IT. Whereas, (Palka, 2009) had proven that mobile recipient's perceived behavioral control could be influence by resources based setting. Lastly, perceived

behavioral control is proven as positively related to consumer's negative word of mouth communication.

### *2.3 Perceived Benefits*

The perception of the positive consequences that are caused by a particular action is referred to Perceived Benefits (Leung, 2013). The improvement of informational technology enables customers to access and utilize relatively convenient, effective and inexpensive channels to buy travel products (Buhalis and Law, 2008) that achieves about perceived benefit to technology uses (Kim, 2008). Mobile travel booking is increasing and is being driven by travelers looking for last-minute deals and over-night stays (Edhotels, 2018). More specifically, the mobile reservation channel enables travelers to receive location-based recommendations, comparing to a specific moment when people achieve to accomplish a particular task by utilizing smartphones.

### *2.4 Subjective Norm*

Subjective norm is the perceived social pressure to perform or not to perform the behavior (Ajzen, 2002). It is also measured as normative belief without motivation to comply. Normative belief is the impression of a person towards the perspectives in regards to his or her demonstration towards the behavior generated by a person believed to be important to that individual (Ajzen, 2002). The theory of planned behavior (TPB) (Ajzen, 2002) added to these variables that whenever the stronger the drive to adhere to social pressure, the capacity of social weight is more essential. Moreover, the study of (Goh, Ho, Jiang, 2015) showed that subjective norm began through social impacts is crucial to determine users' intention toward the acknowledgement and usage of technology. In addition, subjective norm also influences consumer's online purchase intention. Also, it argued to have huge effect toward user's cooperation within the online community. The community, peer impacts are normally word-of-mouth generated by associates, collaborators and relatives. On the other hand, external impacts are generated by media insights, impersonal information and expert opinions. If negative word-of-mouth communication is viewed as a common and righteous behavior by the actor's important others, and individual inspiration to consent to what his or her significant others is high, and individual may have higher propensity or stronger intention to engage negative word-of-mouth communication. Since numerous people concerned about what others may say, and individual may have a high tendency to consent with what his or her significant others think (Simon, 2016).

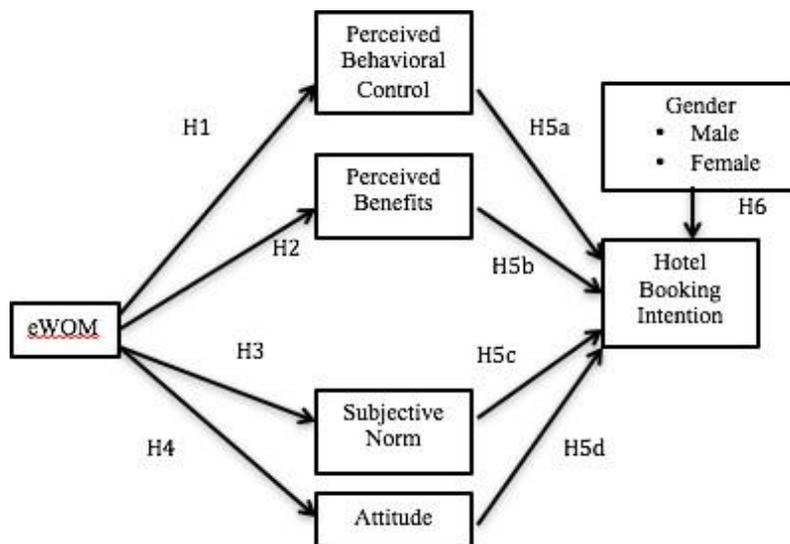
### *2.5 Attitude*

In psychology, an attitude refers to a set of feelings, convictions, and behaviors toward a particular object, individual, thing, or occasion. Attitudes are regularly the result of experience or upbringing, and they can have an incredible impact over behavior. While attitudes are persisting, they can likewise change (Kendra, 2018). Several studies have also demonstrated that word-of-mouth has a dominant part impact influencing and developing individual's attitudes and behavioral intention. Concerning for information exchange, consumers whom initially get good or bad information will develop a good or bad attitude which would never be changed regardless of whether the individual receives any bad or good word-of-mouth information. Positive word-of-mouth additionally brings out favorable

attitude towards a product as compared to negative word-of-mouth. Moreover, attitude toward given website and the Internet assumes an important role in explaining consumer's attitude pertaining to both brand behavior and their behavior. At last, word-of-mouth generated from friends and family. They play an important role in improving certain image perception of a travel destination towards an individual (Beerli and Martin, 2004).

## 2.6 Research Frameworks and Methodology

The conceptual framework of this study is developed from Sangwon and Yiquan (2017) theoretical framework. This framework was aimed to identify the direct influence of electronic word of mouth towards customer's intention to book a hotel. There are six



independent variables used in this study to measure the relationship among self-efficacy and eWOM as well as perceived behavioral control, perceived benefits, subjective norm, and attitude.

Figure 1: Conceptual Framework Research Hypothesis

Table 1: Hypothesis Development

No.	H	Hypothesis
1	H1	eWOM has a significant effect on perceived behavioral control toward hotel booking intention via smartphone.
2	H2	eWOM has a significant effect on perceived benefits toward hotel booking intention via smartphone.
3	H3	eWOM has a significant effect on subjective norm toward hotel booking intention via smartphone.
4	H4	eWOM has a significant effect on attitude toward hotel booking intention via smartphone
5	H5	Perceived behavioral control (H5a), perceived benefits (H5b), subjective norm (H5c), and attitude (H5d) has a significant

		effect toward hotel booking intention via smartphone.
<b>6</b>	<b>H6</b>	There is a significant mean different between male and female on hotel booking intention via smartphone.

### 3. Research Methodology

This research adopted nonprobability convenience and quota sampling method. The data was collected from target respondents of 400 people who live in Bangkok. The analysis anchored multiple linear regression and simple linear regression using a five-point Likert Scale type, and respondents rated from 1 (strongly disagree) to 5 (strongly agree) and anchored independent sample T-Test to the different among gender. The questionnaire is divided into three parts, consisted of demographic factors, screening question and studied variable.

#### 3.1 Measurement of variables

The target of this research is people living in Bangkok and who has experiences to book a hotel accommodation using a smartphone.

#### 3.2 Population and Sampling

The questionnaire was allocated to 400 respondents who live in Bangkok to collect data by using 2 methods, convenience and quota sampling method.

Convenience sampling is a type of non-probability sampling method that people are being taken from the group that is easy to contact or reach. Convenience sampling can be used by anyone and has been around for ages. The reason that it is often using because of the numerous advantages it provides. This method is speed, simple, promptly, accessibility, and cost effective, making it to be an alluring alternative to generally most researchers. Second one of non-probability sampling type is quota sampling method. This method is to take a much tailored sample that is in proportion to some characteristic of a population. The researcher can carefully control to distribute the questionnaire by 50% of male and 50% of female for this research.

#### 3.3 Estimate Sample Size Technique

$$n = \frac{Z^2}{4e^2}$$

Which: n is the sample size

e is the level of precision = 0.05

Z is the statistic for a level of confidence Z = 1.96

$$\text{So: } n = \frac{(1.96)^2}{4(0.05)^2}$$

$$n = 384.16 = 400$$

### 3.4 Reliability Test

Reliability test result is executed by using Cronbach's Alpha Coefficient at the pilot stage of 30 respondents. This is considered to examine the reliability level of each group of items included in the questionnaire whether it is consistent and higher than 0.6 or not (Cronbach, 1951). With the reference in Table 1, the Cronbach's Alpha Coefficient falls in a range between 0.638 to 0.900 which is higher than 0.6. This indicates that high internal consistency is met for all research constructs. Therefore, it implies that the questionnaire developed for this study is fully achieved the standard required for reliability test, and is acceptable to move research forward.

Table 2: Consistence of the scales test (N=30)

Variable	Number of Item	Cronbach's Alpha
eWOM	4	0.900
Perceived Behavioral Control	3	0.716
Perceived Benefits	4	0.814
Subjective Norm	4	0.720
Attitude	3	0.809
Behavioral Intention	3	0.638

## 4. Results and Discussion Data Analysis

In analyzing data, Multiple Linear Regression (MLR) and Single Linear Regression (SLR) are used to finding the effect, relationship, and difference between dependent and independent variable according to defined conceptual framework. In addition, independent sample T-Test is applied to distinguish the mean difference between genders. Descriptive analysis is also used in order to explore the data to see the overall information.

### 4.1 Descriptive Analysis

As summarized the demographic profile summary data of all 400 respondents whose participated in the questionnaire in Table 3 below, the gender proportion of respondents who participated in this study was 50% of female and 50% of male, the age respondents proportion was divided the same by using quota sampling technique. The main majority of respondents were graduated with bachelor's degree with 67.5% followed by 31.3% of the master degree or higher. In addition, more than half of respondents are employee with 45.8% followed by self-employed 37.3% and mostly had income above 50,001 baht which is 44.5%. Moreover, the respondents had experienced travel with friends, 30.3% and mostly company for the trip at the range of 3-5 people, 49.3% with the length of stay at 3 days, 37.8%.

Table 3: Demographic Profile and Consumer Behavior Information (400respondents)

<b>Demographic</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Gender</b>		
<b>Male</b>	200	50
<b>Female</b>	200	50
<b>Age</b>		
<b>Below 18 years old</b>	11	2.8
<b>18-32 years old</b>	247	61.8
<b>33-47 years old</b>	104	26
<b>Above 48 years old</b>	38	9.5
<b>Status</b>		
<b>Single</b>	290	72.5
<b>Married</b>	95	23.8
<b>Other</b>	15	3.8
<b>Education</b>		
<b>Diploma or Below</b>	5	1.3
<b>Bachelor Degree</b>	270	67.5
<b>Master Degree or Higher</b>	125	31.3
<b>Occupation</b>		
<b>Student</b>	20	5
<b>Government Official / State Enterprise Employees</b>	38	9.5
<b>Employee</b>	183	45.8
<b>Self-Employed</b>	149	37.3
<b>Other</b>	10	2.5
<b>Income</b>		
<b>Less than or equal to THB 10,000</b>	7	1.8
<b>THB 10,001-30,000</b>	87	21.8
<b>THB 30,001-50,000</b>	128	32.0

<b>Above THB 50,001</b>	178	44.5
<b>Consumer Behavior Information</b>		
<b>Travel party in the most recent trip</b>		
<b>Alone</b>	36	9.0
<b>With family</b>	114	28.5
<b>With children</b>	10	2.5
<b>With partners</b>	83	20.8
<b>With friends</b>	121	30.3
<b>With colleagues</b>	36	9.0
<b>Number of travel company in the most recent trip</b>		
<b>1 people</b>	53	13.3
<b>2 people</b>	87	21.8
<b>3-5 people</b>	197	49.3
<b>More than 6 people</b>	63	15.8
<b>Length of stays in a hotel</b>		
<b>1 day</b>	53	13.3
<b>2 days</b>	126	31.5
<b>3 days</b>	151	37.8
<b>4 days</b>	20	5.0
<b>5-10 days</b>	46	11.5
<b>More than 11 days</b>	4	1.0

#### *4.2 Pearson's Correlation*

Regarding to the Pearson's Correlation Matrix for the hypothesis in Table 1 (H1-H6) exhibit in Table 4, all variables have positive correlations among each other with P-values less than 0.05. According to the reference of the strength of correlation defined by Chegg, the overall value of correlation has greater than 0.1 it can be implied as strong positive relationship. There are two pairs in the matrix showed the strong relationship, which are Perceived Benefits (PB) with Perceived Behavioral Control (PC) at 0.631 correlations and Subjective Norm (SN) with Perceived Benefits (PB) at 0.558 correlations.

Table 4: Pearson's Correlation Matrix for Hypothesis (N=400)

Variable	Mean	SD	EWOM	PC	PB	SN	AT	BI
<b>eWOM</b>	3.9514	0.82990	1					
<b>PC</b>	4.3309	0.62781	0.360*	1				
<b>PB</b>	4.0619	0.67195	0.405*	0.631*	1			
<b>SN</b>	4.1800	0.65137	0.332*	0.427*	0.558*	1		
<b>AT</b>	4.3130	0.57243	0.145*	0.240*	0.179*	0.251*	1	
<b>BI</b>	<b>4.1406</b>	<b>0.63653</b>	<b>0.157*</b>	<b>0.311*</b>	<b>0.156*</b>	<b>0.156*</b>	<b>0.248*</b>	<b>1</b>

Note: \* represents the correlation which is significant at 0.05 level (1-tailed).

#### 4.3 Inferential Analysis and Multicollinearity Validation

Table 5: Simple Linear Regression Result (H1), Dependent Variable: Perceived Behavioral Control (PC)

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
H1	Perceived Behavioral Control	0.360*	1	Supported
R Square	0.129			
Adjusted R Square	0.127			

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$ .

The result exhibit in Table 5 shows R<sup>2</sup> at 0.129 which can be implied that independent variable Electronic Word of Mouth (eWOM) could well explain the dependent variable, Perceived Behavioral Control (PC) around 12.9% at the significant of 0.05 or the 95% of confident level. The P-values of the independent variable (eWOM) is less than 0.05 which confirm that the hypothesis H1 is supported. As the result, Electronic Word of Mouth has statistically significant effect on Perceived Behavioral Control (PC) at the standardized coefficient ( $\beta$ ) 0.360.

Table 6: Simple Linear Regression Result (H2), Dependent Variable: Perceived Benefits

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
H2	Perceived	0.405*	1	Supported

	Benefits			
R Square	0.164			
Adjusted R Square	0.162			

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$ .

The result exhibit in Table 6 shows R<sup>2</sup> at 0.164 which can be implied that independent variable Electronic Word of Mouth (eWOM) could well explain the dependent variable, Perceived Benefits (PB) around 16.4% at the significant of 0.05 or the 95% of confident level. The P-values of the independent variable (eWOM) is less than 0.05 which confirm that the hypothesis H2 is supported. As the result, Electronic Word of Mouth has statistically significant effect on Perceived Benefits (PB) at the standardized coefficient ( $\beta$ ) 0.405.

Table 7: Simple Linear Regression Result (H3), Dependent Variable: Subjective Norm (SN)

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
H3	Subjective Norm	0.332*	1	Supported
R Square	0.110			
Adjusted R Square	0.108			

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$ .

The result exhibit in Table 7 shows R<sup>2</sup> at 0.110 which can be implied that independent variable Electronic Word of Mouth (eWOM) could well explain the dependent variable, Subjective Norm (SN) around 1.10% at the significant of 0.05 or the 95% of confident level. The P-values of the independent variable (eWOM) is less than 0.05 which confirm that the hypothesis H3 is supported. As the result, Electronic Word of Mouth has statistically significant effect on Subjective Norm (SN) at the standardized coefficient ( $\beta$ ) 0.33.

Table 8: Simple Linear Regression Result (H4), Dependent Variable: Attitude (AT)

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
H4	Attitude	0.145*	1	Supported
R Square	0.21			
Adjusted R Square	0.19			

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$

The result exhibit in Table 8 shows R2 at 0.21 which can be implied that independent variable Electronic Word of Mouth (eWOM) could well explain the dependent variable, Attitude (AT) around 2.10% at the significant of 0.05 or the 95% of confident level. The P-values of the independent variable (eWOM) is less than 0.05 which confirm that the hypothesis H4 is supported. As the result, Electronic Word of Mouth has statistically significant effect on Attitude (AT) at the standardized coefficient ( $\beta$ ) 0.145.

Table 9: Multiple Linear Regression Result (H5a-H5d), Dependent Variable: Booking Intention (BI)

Hypothesis	Variable	Standardized Coefficient ( $\beta$ )	VIF	Result
H5a	Perceived Behavioral Control	0.312	1.721	Supported
H5b	Perceived Benefits	-0.088	2.001	Not Supported
H5c	Subjective Norm	0.026	1.515	Not Supported
H5d	Attitude	0.182	1.094	Supported
R Square	0.133			
Adjusted Square	R	0.124		

Note: \* represents standardized coefficient ( $\beta$ ) with P-value  $\leq 0.05$ .

The result in Table 9 illustrate that R2 at 0.133 which can be explained that Perceived Behavioral Control (PC), Perceived Benefits (PB), Subjective Norm (SN) and Attitude (AT) can represent 1.33% of all independent variables that effect toward hotel booking intention (BI) via smartphone at significant level of 0.05 or 95% of confident level. The P-value of all independent variables less than 0.05 indicated that the hypotheses namely H5a, H5c and H5d are supported whereas H5b is not supported. Standardized Coefficient ( $\beta$ ) of all hypotheses illustrated that all independent variables statically significant positive effect on Booking Intention (BI). In addition, PC has the most effecting with Standardized Coefficient ( $\beta$ ) at 0.312. Surprisingly, the result obviously presents that only PB has negative significant effect toward on hotel booking intention (BI) via smartphone with Standardized Coefficient ( $\beta$ ) at -0.088. Hence, PB is considering being an inhibitor to the innovation resistance. The variance inflation factors (VIFs) were endorsed to validate the multicollinearity problem. VIFs were less than 5.00 which indicate that no critical issues for multicollinearity problem existed with this study.

#### 4.4 Independent Sample T-Test

The independent sample t-test was applied in the hypothesis of H6, which is testing on the significant mean different between male and female on hotel booking intention via smartphone.

Table 10: Independent Sample T-Test (H6)

Hypothesis	Gender	N	Mean	Std.Deviation	Std. Error Mean		
H6	Female	200	3.8622	0.67919	0.04803		
	Male	200	4.4190	0.44195	0.03125		
Hypothesis	Equal Variance	Levene's Test		T-Test			
		Sig.	t		df	Sig.	Mean Difference
H6	Assumed	27.507	0.000	-9.717	398	0.000	-0.55675
	Not Assumed			-9.717	341.898	0.000	-0.55675

The result exhibit in Table 10 shows the mean of Booking Intention (BI) with 3.8622 on female and 4.4190 on male. The result also indicates that there is a significant difference in BI between female and male with the condition of  $T(398) = -9.717$  and the P-value of independent sample t-test (0.000) that less than 0.05 which means that the hypothesis namely H6 is supported.

#### 5. Conclusions and Recommendations

This research was conducted an empirical study to examine the factors effect of electronic word of mouth on a hotel booking intention via smartphones. The study was also extended to investigate the mean different between genders of 400 respondents in Bangkok area, which affect the actual usage of hotel bookers via smartphones as a unique contribution of this paper. The conceptual framework was adopted from an integration of the unified theory of effect of positive and negative online comments on business traveler's intention to purchase a hotel room of Fishbein and Ajezen (1975) to test six hypotheses. The results obtain from Pearson's Correlation, Simple Linear Regression, Multiple Linear Regression and Independent Sample T- Test analyze to conclusion of this study. As the analyzing result, eWOM is significant effect on perceived behavioral control, perceived benefits, subjective norm and attitude toward hotel booking intention via smartphone. This showing that eWOM is strongly influenced to the hotel customer on decision to book a hotel. Perceived Behavioral Control, Subjective Norm and Attitude have statistically significant positive effect toward hotel booking intention while Perceived Benefits has statistically significant negative effect

toward hotel booking intention via smartphone. The result revealed that the most effect factors on hotel booking intention were perceived behavioral control followed by attitude, subjective norm and perceived benefits. Perceived Behavioral Control is the most important variable that effect on hotel booking intention. This concludes that perceived benefit control requires from booking intention of respondents who use smartphone to book the hotel in Thailand. With reference, the finding exactly aligns with the studies of Faranak, (2015). Hotel customers are relied on technology which electronic word of mouth has been perceived as a standout amongst the most persuasive resources of information transmission. The advances of information technology and the emergence of online social networks sites have changed the way information has transmitted. It is very important for hotel investors to clearly understand how these factors affect consumption behavior of people today. The analysis of mean different between female and male can conclude that both genders have significant on hotel booking intention via smartphone.

## **6. Limitations**

There are several limitations for this study, one limitation in this study is that the research focuses only on the samples from people who stay in Bangkok and have ever booked a hotel via smartphone. Therefore, the findings of this study may not be applied to another city or country since people in different city or country also have different in culture, environment, and geographic.

## **7. Future Research**

Future research should enhance the generalizability of the findings by examining the target city or country and should consider the event that related to Thailand hotel booking and keep updating the information or booking details. In addition, researchers should add more variables such as trust or reliability, it's an important thing to concern because people are probably use this kind of service if they are having trust in the electronic word of mouth before deciding to book a hotel.

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# ENHANCING FIRM GROWTH POTENTIAL: THE ROLE OF SOCIETAL INSTITUTIONS

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## Abstract

This study examines the role that societal institutions play in influencing the growth potential of firms. Specially, this study examines how societal institutions affect the value of firm growth propensity, and how the size of the firm moderates this relationship. The results show that various societal institutions have considerable effects on firm growth potential, depending on the type of societal institutions. And these effects are stronger for smaller firms than for larger firms. Future research and managerial implications are provided.

**Keywords:** *Growth; Institutions; Firm Size.*

## 1. Introduction

How institutions influence firm actions and performance has been the central issue of strategy and international business (Hawawini, Subramanian, & Verdin, 2004; Khanna & Rivkin, 2001a; Makino, Isobe, & Chan, 2004; McGahan & Porter, 1987). Previous literature has examined how firm, industry, and country effects influence the development of firm performance (Hawawini, Subramanian, & Verdin, 2004; Khanna & Rivkin, 2001). At the firm level, the resource-based view suggests that the firm's capabilities and resources are the primary source of a firm's performance as well as sustainable advantage (Barney, Wright, & Ketchen, 2001). At the industry level, the industrial organization perspective suggests that a firm's performance and sustainable advantage depends on the industry structure (Cavaglia, Brightman, & Aked, 2000; Powell, 1996). And at the country level, the field of international business suggests that country effects also determine the performance of the firm (Brito & Vasconcelos, 2003; Furman, 2000; Makino, Isobe, & Chan, 2004; McGahan & Porter, 1987). Studies on the variance decomposition of firm profitability have confirmed that all three determinants mentioned affect the performance of firms at various degrees, with firm effects accounting for approximately 20 to 40%, industry effects accounting for approximately 5 to 10 %, and country effects accounting for approximately 5 to 20 % of performance variation (Brito & Vasconcelos, 2003; Brouthers, 1998; Estrada, Kritzman, & Page, 2004; Ferreira & Ferreira, 2003; Phylaktis & Xia, 2004a, 2004b).

However, these aforementioned studies only measure the past performance of firms in terms of sales or return on assets. This study contends that, it is also important to measure such effects through the growth potential of firms because it determines the propensity for superior performance in the *future* – rather than based on *past* performance. Several streams of research have demonstrated that a country's unique institutional structure influences managerial behavior and strategic activities which may potentially affect a manager's ability to recognize firms' growth potential (Steensma, Marino, Weaver & Dickson, 2000). Despite such importance, no research has yet examined how national institutions affect firm growth potential. In addition, the advantages of larger firms over smaller firms have long been stressed in the field of strategy (Porter, 2000). Yet, it is unknown whether the institutions influence the growth potential of large firms and smalls firms in a uniform matter.

This purpose of this study is to examine how national institutions, in particular societal institutions, support or limit the development of firm growth potential. Specifically, this study addresses the following research questions: (1) Does the level of firm growth potential vary according to the societal institutions where it is located? How? (2) And if so, what effect does the size of the firm have on the ability of firms to develop growth potential in conjunction within their societal institutions? This study uses four societal institutional traits as defined by Hofstede (2002) to measure the effects of national institutions: individualism, uncertainty avoidance, masculinity, and power distance. Past research has indicated that these cultural values influence entrepreneurial activity as well as investment activity (Hennart & Larimo, 1998; Steensma, Marino, Weaver, & Dickson, 2000). For example, Steensma et al. (2000) found that societies that value cooperation and avoid uncertainty tend to value cooperative ties and strategic alliances with other firms.

## **2. Literature Review**

### *2.1 Firm performance*

Previous studies have examined the antecedents of cross-country differences in firm performance by using two distinct dependent variables: past performance in terms of sales level and ROA/ROE level, and success in terms of venture or alliance formation. In terms of sales level and ROA/ROE level, these studies make a significant contribution to the understanding of the country effects on firm performance as a dependent. Christmann, Day, and Yip (1999) Measured the effect of country characteristics on the performance of foreign subsidiaries and found that those country characteristics had a considerable effect on firm performance. Wan and Hoskisson (2003) found that firms from countries with higher developed institutions gain better performance, whereas Chakrabarti, Singh, and Mahmood (2007) found that firms from less developed institutions may have better internationalization performance. Tan and Chintakananda (2016) found that political institutions and legal institutions have a considerable effect on firm performance.

In terms of success in ventures or alliances formation, these studies make a significant contribution to the understanding of the sources of country effects on firm outcome. Allred and Steensma (2004) studied R&D activities in four industries and found that industry structure has a more pronounced effect on R&D intensity and in multidomestic industries, national context has a stronger influence on R&D intensity. In a separate stream of research, other researchers have found national institutions to have a large effect on managerial decision making, and subsequently, firm growth. Busenitz, Gomez, and Spencer (2000) found that country institutional profiles influence the rate of entrepreneurial growth. In addition, Shane (1994), Busenitz and Seawright (1995), and Steensma, Marino, Weaver and Dickson (2000) found that national institutions affect the rate of venture creation, innovation, and formation of technology alliances of entrepreneurial firms. Although these studies contribute to our understanding of firm performance, it does not address the antecedents to development of future growth potentials of firms.

### *2.2 Firm growth potential*

Firm growth potential is the portion of firm value that is derived from the firm's opportunities for growth (McGrath, Ferrier & Mendelow, 2004; Kester, 1984). Growth potential are discussed in the real options literature, where "an option is the right but not the obligation, to take an action in the future (Amran & Kulatilaka, 1999)". When managers pursue opportunities that allow them to enhance the upside potential and contain the downside costs

or risk, they can create valuable growth potential to the firm. In the field of strategy, real options have been widely used to understand the decision-making mechanisms of managers (Bowman & Hurry, 1993). The usage in managerial decision making is not surprising as managers face high degrees of uncertainty when making strategic investment decisions. As a result, many decisions by corporations combine real options theory into their decision making (McGrath, 1997; Trigeorgis, 1996; Kogut, 1991). By combining real options into their decision making, firms purchase or exercise options that based on the uncertainty that they face in order to minimize risk and enhance their opportunities (Reuer & Tong, 2003). Myers (1977) had suggested that the future investment opportunities of a firm can provide growth potentials, because firms have the rights to determine whether they want to exercise their options or not.

### *2.3 Institutions*

Country institutions are defined as the rules for which business is conducted by each country. It includes property rights and contracts, as well as norms of behaviour and codes of conduct (Makino et al., 2004). Firm performance can be influenced by the country institutions that exist, including the performances of business groups (Khanna & Rivkin, 2001b), multinationals, (Brouthers, 1998), foreign subsidiaries (Christmann, Day & Yip, 1999). Other research has explored the impact of such institutions on venture creation, innovation, and formation of alliances among entrepreneurial firms (Busenitz, Gomez & Spencer, 2000; Steensma et al., 2000; Shane, Venkataraman & McMillan, 1995). These country institutions affect managerial actions. In addition, the country's culture can shape firm performance. Culture can be defined as "the interactive aggregate of common characteristics that influences a human group's response to the environment...(and) distinguishes people of one nationality from those of another" (Hofstede, 2002). Past research has indicated that a country's cultural values influence firm's entrepreneurial activity and a firm's likelihood of investing in their future growth (Hennart & Larimo, 1998). This study focuses on the effects of four factors in the national context that can influence growth opportunities: uncertainty avoidance, masculinity, individualism, and power distance.

### *2.4 Hypothesis Development*

#### *2.4.1 Uncertainty avoidance*

Uncertainty avoidance is "the extent to which the members of a culture feel threatened by uncertain or unknown situations (Hofstede, 2002)". Societies with high tolerance for uncertainty (low uncertainty avoidance) tend to have a higher level of innovation than societies with a low tolerance for uncertainty, and societies with high uncertainty avoidance are thought to prefer working through hierarchical structures with norms, rules and procedures as uncertainty is viewed as dangerous (Shane, Venkataraman, & MacMillan, 1995). Such high innovation has been founded to enhance the overall level of firm growth potential (Tong et al., 2008). Also, people in societies with high tolerance for uncertainty tend to be more receptive to new ways of thinking and doing things (Phillips & Wright, 1977; Yates et al., 1989) and have higher levels of entrepreneurial behavior (Sexton & Bowman, 1985), which is likely to enhance the growth potential of the firm. When uncertainty in the market increases, the possible range of values increases and the options available to firms becomes more valuable. However, firms in cultures with a preference for low uncertainty are likely to behave suboptimally, foreclosing the growth potential available to the firm, whereas firms in cultures with a preference for high uncertainty are likely to behave optimally, enhancing the potential growth potential available to the firm. Thus,

*H1: The higher a country's level of uncertainty avoidance, the lower the value of the growth potential of the firm.*

#### *2.4.2 Masculinity*

Masculinity represents the overall toughness or aggressiveness of a society, appreciation of superiority and dominance, and the desire to stand above the crowd. People in masculine cultures “are competitive and view the world in terms of winners and losers (Hofstede, 2002; Steensma et al., 2000)”. In contrast, feminine cultures tend to be more accommodating and cooperating for mutual gains. Multiple winners can harmoniously coexist with losers (Hofstede, 2002; Steensma et al., 2000). According to Kanter (1988), cooperation between individuals within the firm for mutual gains can contribute to the innovativeness of the firm. Also, higher cooperation has shown to lead to higher pursuit of technological alliances (Steensma et al., 2000). Such higher levels of innovativeness and potential alliances will likely lead to higher growth potential for the firm. In contrast firms in masculine cultures that pursue higher levels of innovation are more likely not to cooperate with other potential alliance partners and more likely go alone in their pursuit of innovation (Shane et al., 1995). Such options are likely to be more limited than pursuit of innovation through alliances, leading to a lesser growth potential. Thus,

*H2: The higher a country's level of masculinity, the lower the value of the growth potential of the firm.*

#### *2.4.3 Individualism*

Individualism represents the extent that societies appreciate individual achievement. A high level of individualism suggests that the degree in which the relationship between individuals are loosely structured. A low level of individualism, or high level of collectivism, emphasizes the importance of extended groups “where everyone takes responsibility for fellow members of their group (Hofstede, 2002)”. Such level of individualism is also associated with higher independence, autonomy and flexibility, and that there appears to be a relationship between the level of the wealth of a country and the degree of individualism. Whereas individuals in collectivistic societies “place a strong emphasis on preserving social harmony (Ouchi, 1980)”. People in collectivistic societies avoid take actions conflict with the thinking and orders of their bosses in order to not embarrass their bosses. Mann (1989) studied American businessmen in China and noted that people with a high level of collectivism tend to be more accepting of authority, and are more likely to confirm their thinking to match their bosses. Several streams of research have concluded that diversity, rather than conformity also leads to higher firm innovation and performance (Simons, Pelled, & Smith, 1999; Wiersema & Bantel, 1992). Thus,

*H3: The higher a country's level of individualism, the higher the value of the growth potential of the firm.*

#### *2.2.4 Power distance*

Power distance represents the degree of “social acceptability of an unequal distribution of power (Hofstede, 2002)”. Societies with a high degree of power distance have high inequalities of power and wealth, and that the society is likely to have a structure that allows little upward mobility of its citizens and decision making mechanism that is reserved only for senior management (Hofstede, 2002). Firms within societies with a low degree of power

distance will tend to have a flat structure where the distribution of decision making authority is less rigid with higher participation from staff throughout the firm (Hofstede, 2002). Past research has shown that firms in which resources and authority is shared with members at the lower level of the firm without direct control by members at the higher levels of the firm hierarchy are more likely to achieve higher level of innovation (Shane et al., 1995). Similarly, past research has shown that a more flexible organizational structure is associated with higher growth potential (Folta & Miller, 2002). From the discussion above, it can be inferred that a high degree of power distance is negatively correlated with higher firm growth potential. Thus,

*H4: The higher a country's level of power distance, the more likely that the growth potential of the firm will be lower.*

#### 2.4.5 Firm size

Previous literature suggests that resources possessed by firms are important, and firms will be able to pursue high growth opportunities when a fit exists between the firm and the market environment (Chandler & Hanks, 1994). Large firms tend to have positional advantages within the given environment due to broad product lines, potential bargaining power over suppliers and buyers, and also the likelihood of having higher levels of slack to absorb changes in the environment or withstand any unfavorable structural impediments (Dean, Brown & Bamford, 1998). But many of these positive effects have been found to be offset by the higher bureaucratic decision making processes which inhibits their ability to respond to changing environments (Haveman, 1993). Small firms are more likely to have cash constraints and are more likely to be influenced by their environment and market patterns (Levinthal, 1997). Existing literature has suggested that such environment and market patterns are shaped by the level and type of regulations within the country (i.e. bureaucracy), the knowledge and skills of the people within the country, as well as the culture which shapes the business practices of the country (Busenitz et al., 2000). Therefore it can be inferred that institutional and cultural influences will have more impact on the growth potential of smaller firms than larger firms. Thus,

- *H5a: The larger the size of the firm, the negative impact of a country's degree of uncertainty avoidance on the growth potential of firms becomes weaker.*
- *H5b: The larger the size of the firm, the negative impact of a country's degree of masculinity on the growth potential of firms becomes weaker.*
- *H5c: The larger the size of the firm, the positive impact of a country's degree of individualism on the growth potential of firms becomes weaker.*
- *H5d: The larger the size of the firm, the negative impact of a country's degree of power distance on the growth potential of firms becomes weaker.*

### 3. Research Methodology

#### 3.1 Sample

The sampling was based on the data available from Stern-Stewart. One to two countries from each of the six different national clusters as defined by Ronen and Shenkar (1985) was randomly selected. The sample size was 2,452 firms from seven representative countries.

### *3.2 Dependent variable*

The dependent variable is the value of firm growth potential. The calculation of firm growth potential was replicated from the methodology used by Tong & Reuer (2004) and Reuer & Tong (2003), in which the total value of the firm comprises of the value of the assets that the firm has and the value of growth potential.

### *3.3 Independent variable:*

The following Hofstede cultural dimensions indices were used: power distance, individualism, masculinity, and uncertainty avoidance.

### *3.4 Control factors*

Nine independent control variables were used to control for firm effects, industry effects, and country effects. First, for firm effects, similar to Reuer & Tong (2003), four variables were included; capital intensity, financial leverage, slack, and R&D spending, in which all data were obtained from Datastream. Second, for industry effects, Reuer & Tong's model (2003) is replicated by using the mean market-to-book ratio for all firms in the focal firm's industry (at the NAISC 2-digit level), except for the value of the focal firm. For country effects, similar to Khanna & Rivkin (2001), four variables are included; GDP growth per capita for 1999, average 10 year GDP growth per capita (1990-1999), Intellectual Property Protection Index (from World Economic Forum), and Political Risk Indicator (from International Country Risk Guide).

### *3.5 Econometric techniques*

A hierarchical linear model (HLM) was chosen to incorporate both the firm-level and country-level random-error components as well as incorporate the partial interdependencies of firms within the same country or culture group (Hoffman, Griffin, & Gavin; Singer, 1998). This was done by separating the lower level predictors (firm effects and firm growth potential) and higher level predictors (country effects and culture) into two groups and conducting regressions separately in two steps.

## **4. Results**

Table 1 shows the descriptive statistics and correlations among variables. There were some slight correlations between the independent variables (culture variables) as expected. However, this would not pose a problem as each of the independent variables was regressed on the growth potential of the firms separately.

Table 2 shows the results of the regression on all firms. Model 2 shows that uncertainty avoidance decreases the level of growth potential ( $p < 0.05$ ), hence Hypothesis 1 is supported. Model 3 did not show any significance between masculinity and firm growth potential; hence Hypothesis 2 is not supported. Model 4 shows that individualism increases the level of firm growth potential ( $p < 0.05$ ), hence Hypothesis 3 is supported. Model 5 shows that power distance increases the level of firm growth potential with significance ( $p < 0.05$ ), which was not in the expected direction as hypothesized. Hence Hypothesis 4 is not supported. Model 6-9 (small firms) show significance to their corresponding models for Hypotheses 1, Hypotheses 3, and Hypotheses 4. However, the results in Model 10-13 (large firms) did not show any significance for their corresponding hypotheses.

## **5. Discussion**

This study extends our understanding of firm growth propensity, with particular interest in the effects of national institutions on firm growth potential of small and large firms. This study theorized that the variation in national institutions and culture would impact the strategic actions of firms related to growth opportunities, with the effects being particularly strong for small firms. Several of the empirical testing supported the hypotheses. The study found that uncertainty avoidance decreases the level of firm growth potential, whereas individualism increases the level of firm growth potential. However, the study also found that power distance has a significant effect, but not in the expected direction. Because higher levels of power distance are linked to lower levels of hierarchy and less innovation, it was anticipated that the relationship between power distance and growth potential would be negative. One possible explanation for the positive relationship is that more involvement in decision making throughout the firm (lower power distance) may induce decision-making to stick with the status quo. With a status quo bias, firm will behave suboptimally, and the value of the potential growth opportunities will be reduced (Kogut & Kulatilaka, 2004). The results also did not find any relationship between masculinity and firm growth potential. One possible reason may be that low propensity to cooperate with other potential alliance partners and go alone that follows high masculinity cultures may also induce stronger levels of innovations that their partners.

This study is the first study to investigate the differential effects of national institutional differences on the growth propensity of firms, as well as for firms of different sizes. The results of this study have implications for both researchers and managers. In terms of research, there has been extensive debate on the sources of country institutional differences in firm performance and growth as well as the size of the firm. This study extended this domain of research by identifying the specific sources of growth potential of firms that are related to national contexts for different firm sizes.

In terms of managerial implications, this study highlights how firms can overcome their societal barriers. Despite the fact that firms from some countries may have a regulatory and policy advantage over their counterparts from other countries, firms from these focal countries may face potential impediments from having high levels of collectivism and uncertainty avoidance. In order to overcome these barriers, these firms should develop a more flexible and more open culture which will help encourage the breakaway from previous forms of practice, and development of new capability sets in order to attain higher growth potential of growth propensity. Firms from these countries should also encourage incentives and rewards that support the development of intra-firm learning and entrepreneurial discovery to maximize their future growth potential. In addition, this study highlights the fact that small and large firms need to compete in different ways in the pursuit of growth opportunities, not only because of their positional advantages or disadvantages, but also because of their ability to respond or withstand to the structure of the institutional and cultural impediments.

## **6. Limitations of This Study and Future Research**

While this study achieved the objectives set forth at the beginning of this study, there are several limitations to the study. One limitation is the reliability of accounting rules across different countries. However, these concerns are somewhat limited in this study, since any potential variance in accounting rules across countries were accounted for by the Stern Stewart database. The second limitation of the study is that the data sources do not cover all

of the firms in any country which raises the issue of potential selection bias. However, selection bias should be minimal as the selection of firms was not based on firm growth potential, but rather on firm size and stock market activity. Lastly, following Hofstede (2002), this study assumes that managers of firms in each country have cultural characteristics and traits that follow their home country. To accurately map the actual cultural characteristics and traits of managers to their decision making behavior would require a large scale survey across different countries. However, such research design would be difficult to operate. Hence, this sample for each country used in this study should be large enough to capture the overall cultural traits of each country.

This study suggests several paths for future research on the determinants of national institutions and culture on growth potential for firms of different sizes. For example, researchers could consider how national institutions and culture moderates the effects of firm capability investments (e.g. capital expenditure, R&D) of firm growth potential. Is the effectiveness of such capability investment contingent upon the size of the firm? And does such investment vary according to different levels of culture such as uncertainty avoidance? Or researchers could measure the effects of national institutions and culture on firm growth potential under a longitudinal approach (e.g.. how does long-term orientation affect a firm's short term growth potential vs. long term growth potential?) Future work might also examine the growth potential of subsidiaries of firms that are located in countries with different cultural values than the host country, or firms with management whose nationalities or experience are from countries that are different from the culture of the host country. And finally, it is important to understand how the different levels of national institution and culture variables moderate a firms' ability to transform growth potential to actual performance in subsequent periods.

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# TURNING SOCIAL CAPITAL TO SOCIAL INTELLIGENCE: WHY ACUMEN LEADER MATTER?

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## **Abstract**

Recently, both researchers and manager are interested in how firm can pursue growth from within, that is simultaneously exploiting firm factor endowments and exploring new potential knowledge and capabilities. This process requires a great deal of organizational learning capabilities which normally embedded in firm absorptive capability and stock of intellectual capital that underlie unique configurations of human capital, organizational capital, and social capital. This paper is an attempt to identified two distinctive architecture of strategic management that facilitate competitiveness through social intelligence. Designing new role of leadership to ensure highly achievement is a big challenge by refining interpolation of purpose-driven leader supplemented by cooperative social capital, and complemented by dynamic organizational capital. This paper presented a disciplined extrapolation that architecting high potential human capital, supplemented by entrepreneurial social capital. The proposed leadership concept is also provides valuable theoretical implication for leadership literatures regarding to innovation which identified the internal fits and best configuration to bring best out of the existing factor condition.

**Keywords:** *Social Capital, Organizational Capital, Human Capital, Intellectual Capital, Acumen Leader, Social Intelligence, and Innovation.*

## **1. Introduction**

In current disruptive era, where agility, adaptability, and innovation are seen as central to a firm's competitiveness. Consequentially, these conditions have driven organizational learning as a key mechanism for establishing and enhancing dynamic capability and strategic renewal. Reconceptualization of firm factor condition or firm endowment raises an important issue about the components, antecedents, contingencies, and outcomes of the construct. Organizational researchers have noted that organizational learning- or the process of acquiring and integrating new knowledge-can help firm 1) expand the boundary of strategic choice (Hedlund, 1994), 2) improve its ability to dynamically modify unique capabilities (Teece, Pisano, & Shuen, 1997), 3) escape from "success trap" from core competence rigidity (Leonard-Bartom, 1995). While most of researchers focuses on two distinctive approaches of learning: exploration and exploitation, which may consume more resources to extract those finding.

The purpose of this study is to advance our theoretical and empirical understanding of exploitation at the micro-level foundation of organization to enhance innovative capability of the firm through social intelligence. A central premise of this research is to refine interpolation of leadership role in fostering aspiration of organization members to reach their personal mastery. The assumption rest on the dynamic integration fit between the role of leader and their social interaction that will hold great promise as a guiding direction of understanding to promote creativity ecology within the organization. Energizing learning at the micro-level foundations that incorporate individual-level with social interactional factors under supervision of acumen leader might provide better explain to a certain creativity. Thus, this research focused not only the psychological learning foundation of individual but also formulate social capital to practical social interactional on creating sustainable growth. In

addition, acumen leader is proposed to help influencing the learning process to be more effective. Examining the role of social capital to promote learning organization is the key research objective.

In this light, I sought to contribute to the literature by explaining how social capital can become a powerful internal resource of the firm to ensure long-term growth by considering micro-level foundation variables that embed in the study through well-designed engagement model.

## **2. Literature Review**

Considerable evidence of increasingly turbulent environments, heightened competition, and unpredictable technological change requires leader to foster their employees to be more creative. Organizational learning occurs through a process of acquiring, sharing, and integrating new knowledge from outside the firms as well as inside the firm (Crossan, Lane, & White, 1999). The research question arise in the process of learning either organization have to learning to survive or organization are ready to learn that motivate all member to elevate the learning particularly from internal resources in which this research define as learning organization (Senge, 1997). The unique requirements for specific learning to exploit delineate a long-standing issue regarding whether a leader can motivate others to what extent to pursue on turning social capital to social intelligence.

### *2.1 Theory of Social Capital*

Coleman (1990) defined social capital as any aspect of social structure that create value and facilitates the action of individuals within the structure. Just as the creation of physical capital involves changes in materials so as to facilitate production, and human capital involves changes in an individual's skills and capabilities, social capital is created when the relations among people change in ways that facilitate instrumental action (Coleman, 1990).

## **3. Social Capital New Perspective**

Recent advances research in social capital theory (Coleman, 1990) have begun to provide a deeper interrelationship analysis of the ways individual can be influenced from social capital through social network. In addition, organizational research has also moved toward the single analysis to multiple dimensions. The major theoretical approach to the conceptualization of social capital is social resources theory (Lin, Ensel, & Vaughn, 1981a). Social resources theory focuses on the nature of resources embedded within a network. Lin, Ensel, & Vaughn (1981a) stated that it is a social tie of network that conveys advantage. The key empirical question then becomes on "How to facilitate strong tie network structures lead to have more learning motivation that turn social capital to social intelligence on promoting innovation?"

## **4. Turning Social Capital to Social Intelligence**

Energizing the intangible value of social capital requires a high visibility capability of the leader who can facilitate the actions that create value through well design learning process that involves improvement in individual's skill and capabilities within the organization on intelligence basis. Under the law of "survival of the fittest", it is simply a turnover of the economic prosperity, redistributing the resources requires for all the process of production and process of services provides better performance. A reinforcing (amplifying) process is a big challenge to satisfy a desired result and spiral of success.

Social capital refers as any aspect of social structure that creates value and facilitates the actions of individuals within that social structure (Coleman, 1990). The nature of organization either rest on control or learning system in which the spirit of the learning organization trend to fit within learning environment. Organizations learn only through individuals who learn. Moreover, individual learning does not guarantee organizational learning. But without it no organizational learning occurs. It is because people have their own will, their own mind and their own way of thinking. If the employee themselves are not sufficiently motivated to challenge the goals of growth, there will simply be no growth, no gain in productivity. However, all the process occurs within the boundaries of firm structure which a part of social capital. In order to extract a desired ability, it requires a set of tools.

Senge (1990) suggested that to promote learning organization firms needs to 1) fostering employee aspiration toward core discipline, 2) fostering reflection under team building basis that be able to shift the pattern or the platform of each individual thinking to intent action, and 3) encouraging personal mastery to build shared vision and communicate the vision essence in others. Particularly, personal masterly goes beyond competence and skills and even beyond the spiritual of unfolding creativity.

Social capital, in this paper, describes as overall patterns of relationship among employee, which serve as an important mechanism for knowledge exchange toward learning and development. Social capital also has been conceptualized in various ways, and researchers have recently focused on three main dimensions: structure, affect, and cognition (Nahapiet and Ghoshal, 1998).

The structure dimension of social capital refers to the overall network configuration or pattern of connection among individuals. The affect dimension addresses the relational aspects of interpersonal exchange (i.e. trust, motives, expectations, and norms) among individual. And the cognitive dimension of social capital highlights the importance of shared systems of meaning, representation, and understanding among individual (Nahapiet and Ghoshal, 1998). To integrate these three dimensions of social capital, which complement one another, it requires guiding principles that clarify firm's core purpose for strategic move.

## **5. Acumen Leader on Creating Social Intelligence**

Recent research indicates that the different forms of leadership are related to employee learning orientation toward innovation (Amabile, 1988; Shalley and Gilson, 2004). Studies also have provided evidence for a positive relationship between supportive leader and creativity, and a negative relationship between controlling leadership and employee creativity (Tierney and Farmer, 2002). Current researches also extended an attempt to foster innovation through creativity, one of the approach focuses on the influence of leader not on leadership role, which consider as manager duties, but on the spirit that animate a good management. Acumen leader is purposed. It refers to the one that may not necessary the one on the top, it might be teacher, mentor, and colleague. The one who have a sense of purpose to create and to generate organization to make a better life for other with their strong passion to engage in their dairy work that be able to create a spirit of enterprise collectively to shape the future.

Surprisingly lacking research attention is a leadership approach with considerable promise of influencing employee to appreciate their own internal social capital and capitalized it to social intelligence. The propose management concepts focuses on the influence of the leader behavior on follower's value and aspirations, activate their high-order needs, and motivate them to transcend their own self-interest to organizational and social development (Zhang and Bartol, 2010). These transformational processes rely on the charismatic behaviors and

the impact of transactional forms of leader behavior on follower to foster knowledge reflection collectively among structural, affective, and cognitive dimensions of social capital.

In order to fulfill social intelligence objectives, organizational mechanism become a critical factors. Organizational mechanism exist within the boundaries of organizational capital which constitutes of institutionalized knowledge and codified experience that arise from established structure, processes, and routines. Promoting optimum “fitted” routines is required. Therefore, design active action on standard rules, procedures and structures for collaboration and coordination among interdependence individuals through “cognitive interdependence” mindset much encourage by providing a clear shared vision and boundary condition for intelligence action (Kirkman & Rosen, 1999).

## 6. Conclusion

Much has been written and discussed about the development of employee creativity, yet there is little to show for conceptual development in the micro-level foundation, particularly its own social capital. Closing the gap by proposing a learning organization approach with a strong engagement of proposed acumen leader might become an alternative to promise a dynamics learning model for better creativity at the micro-level foundation perspectives. More generally, attention should be given to the assumption underlying organizational mechanism that foster the consideration of “cognitive interrelationship” on initiating innovation.

## 7. Implications for Future Research

This study has focused on the process-based learning within the organization through acumen leader. Thus, additional studies into the antecedents of the complementary learning are needed. These studies may help only the first step to identify sources of internal drive to energize organizational innovation.

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# THE INFLUENCE OF PARASOCIAL INTERACTION BETWEEN VIETNAMESE YOUTUBE VLOGGERS AND THEIR VIEWERS ON VIEWERS' TRAVEL INTENTION & EWOM ENGAGEMENT INTENTION

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## **Abstract**

This paper examines the parasocial interaction (PSI) between travel Youtube vloggers and their viewers and how this interaction affects viewers' decision to travel and their electronic word-of-mouth engagement. Quantitative approach is used to analyze data from 284 respondents who watched travel content on Youtube in Ho Chi Minh City. The results were analyzed by descriptive statistics, reliability and validity test. The partial least squares structural equation modeling (PLS-SEM) was used to testify the research model and hypotheses. The finding shows that Attitude Homophily has the strongest effect on PSI, followed by Openness, Social Attractiveness and Credibility. Also, the parasocial relationship positively affects viewers' decision to travel and electronic word-of-mouth engagement. This study contributes to the PSI literature in the field of communication and marketing.

**Keywords:** *Parasocial Interaction, Youtube Influence, Marketing, Travel Intention, Tourism Industry.*

## **1. Introduction**

The number of social media users has drastically increased over the years due to the development of Internet bandwidth and the increasing mobile device usage. Online content sharing is no longer limited to static text or images as video streaming technology has been extensively developed. Among the most popular video sharing web sites, Youtube is ranked the highest with over 1.8 billion users every month (Business Insider, 2018). It is also the third most popular web sites in the world, besides Google and Facebook (Alexa, 2015). Youtube content producers, usually acknowledged as 'vlogger' or 'Youtuber', have been referenced in previous academic literature as "the site's most active and well-known users, who utilize their interactions to influence the discourse, goals, and activities of the platform" (Lange, 2017). These new kind of online celebrities are considered to be more authentic, accessible, and influential than conventional celebrities, according to a Variety (2014) survey. The socio-economic impacts of Youtube on daily life can be observed worldwide, and Asia countries are no exception to this phenomenon. Particularly in Vietnam, Youtube statistics claim that there are around 40 million smart phone users in the country and 3 out of 4 are using their smart phones to watch Youtube (Ho Chi Minh City's Government Web Portal). After one year of introduction, in 2015 Youtube Vietnam representatives announced that Vietnam is one of the ten Youtube most watch countries (ICTnews, 2015). According to Nielsen's survey (2016), Youtube is the most popular web site used to watch video contents in Vietnam. The characteristics that make the site appealing to people in general is that Youtube offers several ways for users to interact with it. In addition to watching their favorite contents, such as TV shows, comedy, cartoon, music, movies, and vlogs (video blogs), Youtube users – including Vietnamese users - can rate (like/dislike), discuss the content

(through comment section), and share the videos with others. These features not only give social media users a better control span but also offer them a sense of community while interacting with the site. Such engagement in a community encourages viewers to utilize electronic word-of-mouth to connect and communicate to other viewers as well as to share information and discussion about the content (Hennig-Thurau et al., 2004).

Using the theory of Parasocial Interaction (PSI), which is a perceived relationship between media personalities and media users (Frederick, Lim, Clavio, & Walsh, 2012; Horton & Wohl, 1956), this study is conducted to understand how viewers form their travel intention and electronic word-of-mouth engagement through the act of watching travel content on Youtube. Based on this primary objective, there are two others secondary objectives. The first one is to explore the elements that form the parasocial relationship between content producers and their viewers. The second one is to measure the effectiveness and impact of parasocial interaction on predicting viewers' behavioral intentions. From there, practical recommendations will be provided for Youtube vloggers on how to engage in a more effective relationship with the viewers; and for tourism marketers to fully understand how to utilize the Youtube platform to promote their businesses.

To encounter the research objectives, the following research questions are proposed:

- What are the determinants that facilitate a parasocial interaction between Youtube vloggers and their viewers?
- To what extend do these determinants affect the parasocial interaction between Youtube vloggers and their viewers?
- To what extend are viewers' travel intention and electronic word-of-mouth influenced by this parasocial relationship that they establish with Youtube content producers?
- What actions should Youtube vloggers and tourism marketers should take to increase the viewers' travel intentions and electronic word-of-mouth intentions?

## **2. Literature Review**

### *2.1 Parasocial Interaction (PSI)*

Parasocial interaction is a theory that explains the relationship formed between media users and media personality (Frederick, Lim, Clavio, & Walsh, 2012; Horton & Wohl, 1956). The theory is an area of inquiry that has been principally pursued in communication studies as well as in psychology, sociology and related disciplines has been done as well. Horton & Wohl (1956) explained the concept of PSI as an interpersonal involvement that television, radio, and cinema audiences establish with mediated personalities. This involvement includes “seeking guidance from a media persona, seeing media personalities as friends, imagining being part of a favorite program's social world, and desiring to meet media performers” (Rubin, Perse, and Powell, 1985). Unlike normal social interaction, PSI lack reciprocity between media users and media personalities. Horton & Wohl (1956) considered PSI to be “one-sided, non-dialectical, controlled by the performer, and not susceptible of mutual development”.

According to Stever and Lawson (2013), the relationship between celebrities and their fans can be further studied based on the PSI framework, and this is suitable to apply to the case of Youtube vloggers and their viewers. On Youtube, if a viewer forms a parasocial interaction with the vlogger, as this relationship develops, viewer would look on vloggers as a credible source of information and seek for recommendations (Rubin et al., 1985). Consequently,

viewers can consider trip reviews and experience sharing in travel vlogs as a reliable source when they make travel decisions.

## *2.2 Antecedents of PIS*

### *2.2.1 Social Attractiveness*

Perse & Rubin (1989) found that social attraction to media personality was a predictor of PSI. The increase of repeat viewing and the favorable interaction lead to greater attraction to a media personality (Rubin & McHugh, 1987). Socially attractive media personalities are more likely to appeal to viewers and favorably affect the PSI (Rubin & McHugh, 1987). In the context of this study, socially attractive vloggers are proposed to have a positive influence on the PSI between them and their viewers.

*H1: There is a positive relationship between vloggers' social attractiveness and PSI.*

### *2.2.2 Attitude homophily*

“Homophily” is described as “a tendency for friendships to form between those who are alike in some designated respect,” (as Turner, 1994, pp. 444, cites). It is also defined as “the degree to which people who interact are similar in beliefs, education, social status, and the like” (Eyal & Rubin, 2003). Once a person finds similarity with others, frequent interaction is likely to happen. One’s belief can be confirmed through such interaction (Eyal & Rubin, 2003). In a parasocial relationship, interaction between media users and media personalities is likely to be continued and developed if the users notice similar beliefs from the media personalities. Previous literature mentioned attitude similarity as a predictor of PSI between viewers and television personalities (Eyal & Rubin, 2003; Turner, 1993). Because youtube vloggers closely resemble TV characters, this study proposes that attitude homophily will be a predictor of PSI

*H2: There is a positive relationship between attitude homophily and PSI.*

### *2.2.3 Openness*

Auter (1992) studied the concept “breaking the fourth wall” to examine whether revealing information to a person should enhance trust and intimacy. The act of revealing offers the viewers a sense that they are intimately involved in the personalities’ personal information (Meyrowitz 1986) and fosters a feeling that the viewers know the personalities in a much higher level (Horton and Wohl 1956). According to Stern, Russel, and Russel (2007), engagement in a parasocial relationship causes viewer to want to gain more personal details of the personality to imitate a face-to-face relationship. Moreover, self-disclosure increases feelings of intimacy and lowers feelings of uncertainty in a relationship; therefore enhance PSI (Perse and Rubin, 1989). Based on the findings of these previous studies, this study proposes openness as an antecedent of PSI.

*H3: There is a positive relationship between openness and PSI.*

### *2.2.4 Credibility*

Perloff (2013) defined authority, credibility, and social attractiveness as the three fundamental characteristics for communicators. Of the three mentioned factors, credibility is

a vital element for measuring the quality of information (Bae & Lee, 2011). McCroskey (1997) defined credibility as how a receiver reacts to the source of communication at a given time. It is how an audience member perceives the quality of the communicator (Perloff, 2013). Recommendations made by credible source are more likely to be followed, since they are consistent with peoples' attitudes and values (Perloff, 2013). Ohanian (1990) studied how a reliable communicator can effectively convey the message and the results indicated that attitudes and behaviors could be influenced by a trustworthy, attractive, or expert source. Similar conclusions have been made that credible source of information and finally lead to favorable attitudes toward brands (Erdogan, 1999; Friedman & Friedman, 1979). Over the last decade, more and more researches have been carried out to test the product information's perceived credibility (Cheong & Morrison, 2008; Hung et al. 2011; Jonas, 2010). When there is less uncertainty and more interpersonal trust, users will view the vlogger as a part of their social life; therefore form a parasocial relationship with this character.

*H4: There is a positive relationship between credibility and PSI*

### *2.3 Parasocial Interaction and Travel Intention*

Intentions is defined as "the person's motivation in the sense of his or her conscious plan to exert effort to carry out a behavior" (Eagly & Chaiken, 1993, p.168). From that, Spears & Singh (2004) defined purchase intention as "an individual's conscious plan to make an effort to purchase a brand" (p.56). Regarding purchase behavior and travel behavior, many studies have been carried out and the results that indicated than travel experience has some resemblance to the purchase experience. Berkman and Gilson (1986) theorized a purchase decision through a multi-stage model, which includes the stages of need recognition, information search, evaluation of alter natives, choice of products or service, and post-purchase evaluation. Based on the model of purchase decision stages, similar observations were made by researchers of tourism and recreation to theorize a travel purchase process. Gunn (1989) suggested seven phases of travel experiences, which is very similar to the stages of purchase experiences proposed by Berkman and Gilson (1986), The seven stages includes: accumulation of mental images about vacation experiences, modification of those images by further information, decision to take a vacation trip, traveling to the destination, participation at the destination, returning home, and new accumulation of the images based on the experience. From these two framework, it can be concluded that purchase intention and travel intention bear some resemblance to each other.

Online site enables people to exchange opinion, experience, and recommendation more easily. Just like before buying a product, travelers use the new media to look for destination information and other people's previous experience. People purchase intentions, including travel purchase intentions, can be influenced by online reviews, especially those of professional sources (Zhu & Zhang, 2010). A concept of 'market mavens' was established by Geissler and Edison (2005) to mention those who are believed by consumer to be an expert in shopping knowledge across different rage of product categories. They are also considered as opinion leaders (Cheong & Morrison, 2008). In the case of travel vlogger who posts video sharing travel experience and destination information to help viewers to make travel decision, these vloggers can be considered as market mavens. Studies showed that online review generated by users are considered the most credible for consumers to look for information to finalize their decision (Bae & Lee, 2011). Therefore this study proposed that credibility and recommendations from vloggers' travel videos can affect viewers' travel intention.

*H5: There is a positive relationship between credibility and travel intention.*

*H6: There is a positive relationship between PSI and travel intention.*

#### *2.4 Parasocial Interaction and electronic word-of-mouth engagement*

Based on the definition of word-of-mouth (WOM) by Westbrook (1987), electronic word-of-mouth (eWOM) can be defined as informal communication aimed at consumers via Internet-based technology. EWOM communication can happen between producers and consumers, and among consumers themselves. This new way of communication is significantly different from that produced by mass media (Goldsmith, 2006; Lazarsfeld et al., 1944). EWOM offers information about the product or service from the consumers' point of view; therefore, it is very useful to attract potential customer. Hennig-Thurau, Gwinner, Walsh, and Gremler (2004) defined eWOM as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (p. 39). Prior studies stated that positive eWOM engagement is a result of parasocial interaction (Kim & Son, 2009). Various researchers have found that when a consumer satisfies about a product or service, they tend to spread favorable eWOM (Li & Liu, 2014; Maxham, 2001; Van Dolen, Dabholkar & De Ruyter, 2007). In the case of the PSI with Youtube vloggers, the increase in fondness and the decrease of doubt towards the vloggers give viewers a sense of intimacy and trust (Perse and Rubin 1989). This, consequently, will increase cooperation and loyalty intentions with the personality (Morgan and Hunt, 1994; Porter and Donthu 2008). There is also a proved relationship between, PSI and satisfaction, leading to positive eWOM (Fetscherin, 2014; Lim & Kim, 2011). Based on the previous literature, given that a viewer PSI with a Youtube vlogger may generate emotional and cognitive attraction, viewer would likely to recommend the vlogger to their friends and families, or in other words, spreading positive eWOM regarding the vlogger.

*H7: There is a positive relationship between PSI and eWOM engagement.*

### **3. Methodology**

#### *3.1 Questionnaire Design & Data collection*

The target sample of this study is adults from 18 years old and older. Adults are individual travelers who can independently make travel decision on their own. Due to the time and financial limit, the survey will be targeted at adults residing in Ho Chi Minh city only. The Partial Least Squares Structural Equation Model (PLS-SEM) is applied to analyze data, and prior research suggested that a sample size of 100 to 200 is considered appropriate for such this data analysis method (Hoyle, 1995). Although PLS-SEM is able to handle small sample size, the larger sample size ensures a more reliable result. Therefore, in the survey, around 250 Youtube users will be contacted either online or face-to-face to complete an online questionnaire on Google Form, which will take approximately ten minutes. The Google Form questionnaire includes multiple-choice questions and Likert-types scales that are adjusted from previous literature. This study has five constructs in a conceptual model with 35 items (4 items for social attractiveness, 8 items for attitude homophily, 3 items for openness, 5 items for credibility, and 8 items for parasocial interaction, 3 items for travel intention, and 4 items for eWOM engagement). All items will be measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Respondents are encouraged to give the most authentic and accurate answers that truly reflect their perception. Also, the survey is completely voluntary and respondent's information is not public.

### 3.2 Data analysis

Quantitative methodology is used to test how the PSI between Youtube vloggers and their viewer's affects travel intention and eWOM engagement. Survey data is downloaded from Google Form then descriptive statistics is analyzed using SPSS 22. Partial Least Squares Structural equation model (PLS-SEM) is applied to verify the research model and hypotheses and the software SmartPLS will be utilized to estimate the path models.

Since the indicators in this research are correlated and interchangeable, reflective measurement is applied. With such kind of measurement, the indicators' reliability and validity should be thoroughly studied (Haenlein & Kaplan, 2004; Hair et al., 2013; Peter et al., 2007). Also, their outer loadings, composite reliability, AVE and its square root should be examined and reported.

## 4. Research Findings

### 4.1 Sample Description

The survey reached 328 respondents; among them there were 284 valid responses due to the elimination of under-age respondents and those who responded that they have never watched travel content on Youtube. Therefore, the valid responses account for approximately 87% of the total responses. It is also interesting to notice that the most popular travel channel/youtuber to the respondents were 'Khoai Lang Thang' – a Vietnamese male Youtuber who has around 65 millions views on his videos about traveling and cuisine experience. 20% of the respondents stated that they considered this channel as a reference while answering the survey questions.

Of all the valid responses, female is the larger population to watch vlogs on Youtube with 56% (n=159), compared to male with 44% (n=125). Regarding to age range, the highest proportion belongs to young adults from 18 to 25 years old with a combined proportion of 84.5%. It is not surprising that watching Youtube is a habit that appeals to young people. Besides, most of the survey respondents are students, who accounts for more than half of the sample population (54.9%). Following this is office workers with 27.5%, expertise job and housewife with 15.8% and 1.8% respectively. About personal monthly income, it is reasonable that since most of the respondents are students, the majority of income is lower than 3 million VND per month. People with income from 3 – 6 million VND and 6 – 12 million VND occupied 28.2% and 24.6% respectively. The smallest group is respondents earning from above 12 million VND a month, which accounted for merely 4.8%

Table 1: Summary profile of the respondents

Items	Labels	Frequency	Percentage (%)
Gender	Male	125	44
	Female	159	56
	Total	284	100

<b>Age</b>	18 – 21	89	31.3
	22 – 25	151	53.2
	26 – 30	32	11.3
	31 – 35	7	2.5
	Older than 36	5	1.8
	Total	284	100
<b>Occupation</b>	Student	156	54.9
	Office worker	78	27.5
	Expertise: Doctor, engineer, teacher, etc	45	15.8
	Housewife	5	1.8
	Total	284	100
<b>Monthly Income</b>	< 3 million VND	120	42.3
	3 mil – 6 mil VND	80	28.2
	6 mil – 12 mil VND	70	24.6
	> 12 million VND	14	4.8
	Total	284	100

Source: calculated by author

#### 4.2 Outer model loadings

Since the research framework in this study is a reflective model, outer model loadings are the main focus. The standardized path weights connecting the factors to the indicator variables are measured by these loadings. Conventionally, for a reflective model to be well fitting, outer model loadings should be greater than 0.70 (Henseler, Ringle, & Sarstedt, 2012: 269). Any items with loadings from 0.40 to 0.70 should be eliminated if doing this can improve composite reliability (Hair et al., 2014: 103).

After eliminating unreliable indicator, the result is left with statistically reliable indicators to measure the latent variables as presented in the table below.

Table 2: Outer Loadings Matrix

	<b>AH</b>	<b>CR</b>	<b>EWOM</b>	<b>OP</b>	<b>PSI</b>	<b>SA</b>	<b>TI</b>
AH1	0.794						
AH2	0.790						
AH3	0.824						
AH4	0.793						
AH6	0.802						
CR1		0.754					
CR2		0.844					
CR3		0.837					
CR4		0.840					
EWOM1			0.829				
EWOM2			0.746				
EWOM3			0.769				
EWOM4			0.750				
OP2				0.996			
OP3				0.996			
PSI1					0.805		
PSI2					0.814		
PSI5					0.888		
PSI7					0.855		
PSI8					0.739		
SA1						0.882	
SA2						0.815	
SA3						0.733	

TI1							0.719
TI2							0.790
TI3							0.754

Source: calculated by author

#### 4.3 Explanation of target endogenous variable variance

Table 3: Coefficient of determination of endogenous variables

	<b>R Square</b>	<b>R Square Adjusted</b>
EWOM	0.472	0.470
PSI	0.518	0.512
TI	0.689	0.687

Source: calculated by author

Coefficient of determination is the most common effect size measure in path models, carrying an interpretation similar to that in multiple regression. The coefficient of determination,  $R^2$ , is 0.518 for the PSI endogenous latent variable. This means that the four latent variables (Social Attractiveness, Attitude Homophily, Openness, and Credibility) moderately explain 51.8% of the variance in PSI. Similarly, PSI explains 47.2% of the variance in electronic word-of-mouth intention (EWOM). PSI and CR (Credibility) together predict 68.9% of the variance in Travel Intention (TI). Based on the proportion of variation of outcomes explained by the model, it can be concluded that the research model proposed in this study moderately replicated the observed outcomes. The remaining 52.8% in Electronic word-of-mouth engagement and 31.1% in Travel Intention can be clarified by other factors, which were not included in this research.

#### 4.4 Inner model path coefficient sizes and significance

Table 4: Inner model path coefficient

	<b>AH</b>	<b>CR</b>	<b>EWOM</b>	<b>OP</b>	<b>PSI</b>	<b>SA</b>	<b>TI</b>
AH					0.396		
CR					0.172		0.480
EWOM							
OP					0.276		
PSI			0.687				0.497
SA					0.196		
TI							

Source: calculated by author

The inner model path coefficient suggests that AH (0.396) has the strongest effect of PSI, followed by OP (0.276), SA (0.196), and CR (0.172). Since there is no standardized path coefficient that is lower than 0.1, it can be concluded that the four hypothesized path relationships between SA, AH, OP, CR and PSI are statistically significant, although those of CR and SA are not as strong as those of AH and OP. PSI has a strong effect on EWOM since their path coefficient is 0.687; therefore, the hypothesized path relationship between PSI and EWOM is statistically significant. Both the hypothesized path relationships between CR and TI, PSI and TI are moderately significant since their path coefficients are 0.480 and 0.497 respectively.

#### 4.5 Reliability and Validity

Table 5: Results Summary for Reliability and Validity checking

Latent Variable	Indicators	Loadings	Indicator Reliability (i.e loading <sup>2</sup> )	Composite Reliability	AVE
<b>Social Attractiveness</b>	SA1	0.882	0.778	0.853	0.660
	SA2	0.815	0.664		
	SA3	0.733	0.537		
<b>Attitude homophily</b>	AH1	0.794	0.630	0.899	0.641
	AH2	0.790	0.624		
	AH3	0.824	0.679		
	AH4	0.793	0.629		
	AH6	0.802	0.643		
<b>Openness</b>	OP2	0.996	0.992	0.996	0.992
	OP3	0.996	0.992		
<b>Credibility</b>	CR1	0.754	0.569	0.891	0.672
	CR2	0.844	0.712		
	CR3	0.837	0.701		
	CR4	0.840	0.706		
<b>Parasocial Interaction</b>	PSI1	0.805	0.648	0.912	0.675
	PSI2	0.814	0.663		

	PSI5	0.888	0.789		
	PSI7	0.855	0.731		
	PSI8	0.739	0.546		
<b>Travel Intention</b>	TI1	0.719	0.517	0.799	0.570
	TI2	0.790	0.624		
	TI3	0.754	0.569		
<b>EWOM engagement</b>	EWOM1	0.829	0.687	0.857	0.599
	EWOM2	0.746	0.557		
	EWOM3	0.769	0.591		
	EWOM4	0.750	0.563		

Source: calculated by author

#### 4.5.1 Indicator reliability

The indicator reliability value is the square of each of the outer loadings. It is suggested that the value 0.70 or higher is preferred and in the case of exploratory research, 0.40 or higher is acceptable (Hulland, 1999). It can be observed that all of the indicators in this study have individual indicator reliability values that are greater than the lowest acceptable level of 0.4 and some even reach the favorable level of 0.70 and above. This means that all indicators are statistically reliable.

#### 4.5.2 Internal Consistency Reliability

The value 'Composite Reliability' is suggested as an alternative to 'Cronbach's alpha' use in PLS-SEM approach (Bagozzi and Yi, 1988; Hair et al., 2012). From Table 13, such values are demonstrated to be higher than 0.6; therefore, high levels of internal consistency reliability can be observed among all seven variables.

#### 4.5.3 Convergent Validity

Average Variance Extracted (AVE) of each variable is considered to check convergent validity. Table 13 illustrates that there is no AVE values that is lower than the acceptable level of 0.5. It can be concluded that convergent validity is ensured.

#### 4.5.4 Discriminant Validity

Table 6: Fornell-Larcker Criterion Analysis

	AH	CR	EWOM	OP	PSI	SA	TI
AH	<b>0.801</b>						

CR	334	<b>820</b>					
EWOM	617	464	<b>774</b>				
OP	219	252	466	<b>996</b>			
PSI	578	447	687	451	<b>822</b>		
SA	323	371	435	225	450	<b>812</b>	
TI	500	701	713	433	711	439	<b>755</b>

Source: calculated by author

Discriminant validity can be established using the square root of AVE in each latent variable, if this value is larger than other correlation values among the latent variables (Fornell and Larcker, 1981). In Table 14, the value in bold shown on the diagonal of the table is the square root of AVE. All of the values in bold are larger than the correlation values in their columns and their rows. This confirms the discriminant validity.

#### 4.6 Structural Path Significance in Bootstrapping

Bootstrapping is a procedure that calculates T-statistics for significance testing of both inner and outer model. In this study, 5000 subsamples are chosen from the original sample with replacement to give bootstrap standard errors, then gives T-values for significance testing of the structural path.

Table 7: Bootstrapping results of Standard Deviation, T-statistics and P-values for Inner Model

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
SA -> PSI	196	197	0.048	4.096	0.000
AH -> PSI	396	398	0.057	6.944	0.000
OP -> PSI	276	275	0.061	4.524	0.000
CR -> PSI	172	171	0.053	3.222	0.001
CR -> TI	480	481	0.046	10.446	0.000
PSI -> TI	497	496	0.048	10.305	0.000
PSI -> EWOM	687	691	0.033	20.619	0.000

Source: calculated by author

The significance of path coefficients in the inner model are decided by 'T-statistics'. With a two-tailed t-test with a significance level of 0.05, the path coefficient will be significant if the T-statistics is larger than 1.96 and P-value is smaller than 0.05. With all the T-statistics and p-

values satisfy with the condition, seven hypotheses in this study are supported. Of the four hypotheses concerning PSI, the two most significant correlations are between AH and PSI (T-value=6.944, p=0.000) and between SA and PSI (T-value=4.096, p=0.000). Also, the relationships between TI and two variables CR and PSI are highly significant with both p-values= 0.000 and T-values equal 10.446 and 10.305 respectively. PSI is proved to significantly affect EWOM, with T-value=20.619 and p=0.000.

## **5. Discussion and Recommendation**

### *5.1 Theory Reflections*

All four factors (Social Attractiveness, Attitude Homophily, Openness and Credibility) have positive influence on the Parasocial Interaction between Youtube personalities and Youtube viewers. Of the four factors, Attitude Homophily has the strongest effect with its Path Coefficient with PSI = 0.396. This result confirms the finding in the study of Eyal & Rubin (2003) and Turner (1993). As viewers realize some similarities in the way a Youtube vlogger is behaving, they are more likely to form an affection towards the personality that is known as Parasocial Interaction. Advertisers who intend to work with vloggers as a brand ambassador should carefully consider the audience and their values, beliefs, and desires. The second most significant effect on PSI in the study is Openness. This supports the result of L.I. Labrecque (2014). Social Attractiveness is the third factor that positively affects Parasocial Interaction. This finding is consistent with that of Lee & Watkins (2016). It indicates that the level of friendliness that viewers perceive in a youtube vlogger can determine how much they want to engage in a one-sided interaction with such personality. Parasocial Interaction is also positively influenced by credibility, which confirms the finding in Hung et al. (2011). The higher credibility, the higher parasocial interaction is established. This study also confirms the relationships between Parasocial Interaction and Travel Intention, as well as between Parasocial Interaction and Electronic word-of-mouth engagement. Previous literature has shown that PSI has favorable outcomes toward desirable variables, including the study of Kim & Son (2009) and Lee & Watkins (2016). In addition, as once proved in the study of Cen Wang (2015), Travel Intention is also affected by the factor Credibility.

In general, this study extends the PSI literature in the field of communications and marketing. Parasocial Interaction was first introduced more than 50 years ago to study the relationship between audience and radio and television stars (Horton and Wohl 1956), soap opera characters (Rubin & Perse, 1987) and television-shopping hosts (Cortese & Rubin, 2010). Nowadays, the availability of Internet facilitates the study of PSI feelings towards others new media personalities, such as Youtube vloggers. Parasocial Interaction, together with other distinguishing characters of the Internet, will arguably build and strengthen the relationships between consumer and brands.

### *5.2 Implications*

The findings from this study have implications for both advertisers and Youtube vloggers. For social media advertiser in the field of tourism, companies and brands functioning in accommodations, transportation, food and beverage, sightseeing service can take advantage of travel channels on Youtube as an effective marketing tool. These businesses can incorporate with travel vloggers to sponsor for the trips and offer giveaway prizes for viewers on the channel to experience their services. It is wise for advertisers nowadays to have someone that actually use the product, rather than hiring celebrities to mention the product or service through their social media page. The experience and sharing from someone who

actually made the trips would be more credible and realistic than those of celebrity's advertisements, especially in the case of tourism. On the other hand, Youtube content producers, especially travel vloggers, should focus on building stronger connection and parasocial interactions with their audience. The result from this study confirms that once parasocial interaction exists, the vlogger's popularity will grow through electronic word of mouth promotion. It is advisable that Youtube vloggers should try to appear socially attractive and open in sharing honest opinions. This is an ideal way for them to gain greater reliability and interpersonal trust, which later leads to the increase in popularity.

Future research is recommended to consider other scales that determine PSI, such as vlogger's physical attractiveness and user's active frequency. Also, the research framework could be applied to test the parasocial relationship between media users and other media personalities, such as Instagram and Facebook celebrities. This study establish two of the many possible outcomes of the parasocial interaction between Youtube vloggers and viewers. As Youtube and other social media sites are growing and affecting people's life, besides from tourism and electronic word of mouth engagement, other fields such as technology, health care & fitness, education, will be possible to be studied in later research.

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# ASYMMETRY OF THE ANNOUNCEMENT EFFECTS OF CREDIT RATING ADJUSTMENTS IN THE STOCK EXCHANGE OF THAILAND: DOES INDUSTRY GROUP MATTER?

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## **Abstract**

We examine the impact of corporate bond credit rating announcements on abnormal returns of listed companies in several industrial sectors on the Stock Exchange of Thailand. The event study methodology developed by Seiler (2004) is chosen to test the significance of abnormal returns of sampled companies that experience rating events. Results of the study show that in general, Thai stocks response negatively to the announcement of credit rating adjustments. The rebound of stock prices occurs after the official announcement. Similar results emerge when we consider only rating downgrades. In contrast, Thai firms do not experience significant abnormal returns if their rating is improved. This asymmetry is consistent with previous research. However, when we consider each industrial sector separately, the same phenomenon is not observed. Results of the study show that credit rating changes do not lead to significant abnormal returns in real estate & construction sectors. This phenomenon prevails both before and after the time of credit rating changes. It appears that in the case of the real estate & construction sector, new information received from the bond market will not be passed to the equity market. This insignificance is not consistent with previous research. We observe some interesting results when we look at patterns of the cumulative abnormal returns during the event window. As soon as credit rating upgrades were announced, our sampled stocks experience negative abnormal returns and these negative abnormal returns worsen throughout the event window. We theorize that this phenomenon occurs because investors sell these stocks to realize profits following the announcement of positive news. On the contrary, positive abnormal returns are observed after the announcement of credit rating downgrades and these positive returns improve throughout the event window. We theorize that investors in the real estate & construction sector of Thailand employ a contrarian investing strategy, by shifting their capital from the bond market that has just received bad news to the stock market. A redistribution of capital from bond market to stock market causes an increase of stock prices.

**Keywords:** *Credit rating, Cumulative Abnormal Return, Corporate Bond, Creditworthiness.*

## **1. Introduction**

Prior studies have shown significant market responses (or price movements) to changes in security ratings. Market adjustments and credit score changes appear to have a non-monotonic relationship. This phenomenon is observed by Holthausen and Leftwich (1986) and Griffin and Sanvicente (1982) who found that a firm experiences a significant stock price decrease after its bond rating is downgraded, while the opposite phenomenon cannot be

observed after its bond rating improves. Other studies, such as that of Pinches and Singleton (1978), argue that the official announcement of credit rating adjustments is will not send new relevant information to the stock market.

We examine the impact of corporate bond credit rating announcements on stock price performance of listed companies in the real estate & construction sector of the Stock Exchange of Thailand. To do this, we employ an event study methodology to test the significance of cumulative abnormal returns of sampled companies that experience rating events. We attempt to ascertain whether the asymmetric phenomenon mentioned above by Holthausen and Leftwich (1986) and Griffin and Sanvicente (1982) does exist in the Thai real estate & construction sector.

## **2. Related Literature**

We have seen a large body of literature pertaining to information effects of credit rating changes on stock returns. Most prior studies are conducted in the US. Examples include Wansley and Clauretje (1985) and Holthausen and Leftwich (1986) who present evidence suggesting a negative market response following debt rating downgrades, and no response following the upgraded events. Similarly, Hand et al. (1992) find that unexpected downgrades have a negative effect on returns. Also found is that the further the rating drops, the more negative the stock market reacts. Followill and Martell (1997) investigate the impact of the announcement of future rating reviews and subsequent changes and they too find that that downgrade announcements have a negative market impact.

Goh and Ederington (1993) examine the redistribution hypothesis and report that not all rating downgrades will be followed by negative investor reactions, especially the downgrade resulting from changes in the financial leverage that will only result in wealth transfers from bondholders to shareholders. In their subsequent study, Goh and Ederington (1999) find that the negative reaction to the downgrades is more severe in the case of speculative bond issues than in the case of investment grade bond issues. Similar observations are noted by Nayar and Rozeff (1994) who focus on rating changes in commercial papers, and by May (2010) who focuses on over-the-counter bonds. When studying the impact of rating changes on Eurobond prices, Steiner and Heinke (2001) find more negative market reactions in the case of downgrades from investment grade to speculative grade. Steiner and Heinke (2001) also assert that the degree to which the market reacts to rating changes depends on yields, issuer type, and the nationality of the issuer. Dichev and Piotroski (2001) argue that small firms of low credit quality underperform during the first year following the downgrade.

We only find a small body of literature outside the US due to a smaller proportion of debt financing and a lesser presence of the rating agencies. However, research findings of these non-US studies still corroborate those US studies. Examples include the UK study of Barron et al. (1997) and the Australian study of Matolcsy and Lianto (1995). Another closely-related area of research focuses on examining the characteristics that are most influential to rating agencies' development of ratings for life insurance. Eckles and Halek (2012) find several determinants that significantly correspond to the degree to which the market reacts to insurer rating downgrades, which is measured by CARs.

### 3. Methodology and Data

This session contains 2 parts. The first part outlines event study methodology used in this research, including all the necessary steps to test the event. The second part deals with sampled firms that have experienced credit rating changes in the period of 1995-2014.

#### 3.1 Event Study Methodology

This study uses the event study method to compute the CTSAR of all the companies in our sample (Seiler 2004). The announcement date is considered an event date or day 0, and the event study window runs from 15 trading days before the announcement date to 15 trading days after the announcement date. We use the period from 135 trading days before the announcement date (day -135) to 16 trading days before the announcement day (day -16) as a parameter estimation period.

To get the value of CTSAR, the following steps are done as follows; Firstly, for stock  $i$  on day  $t$ , we compute the abnormal return ( $AR_{i,t}$ ) based on the market model. Then for stock  $i$  on day  $t$ , the standardized AR or  $SAR_{i,t}$  is calculated as follows;

$$SAR_{i,t} = \frac{AR_{i,t}}{\sqrt{S_{AR_{i,t}}^2}} \quad (1)$$

where  $S_{AR_{i,t}}^2$  is the variance of the AR for stock  $i$  on day  $t$ , and is computed based on Equation (2) below:

$$S_{AR_{i,t}}^2 = \left[ \frac{\sum_{t=-120}^{-16} (AR_{i,t(est.period)} - \overline{AR}_{i(est.period)})^2}{D_i - 2} \right] \times \left[ 1 + \frac{1}{D_i} + \frac{(R_{m,t(event.period)} - \overline{R}_{m(est.period)})^2}{\sum_{t=-120}^{-16} (R_{m,t(est.period)} - \overline{R}_{m(est.period)})^2} \right] \quad (2)$$

where  $AR_{i,t(est.period)}$  is the abnormal return (AR) for stock  $i$  on day  $t$  over the estimation period.  $\overline{AR}_{i(est.period)}$  refers to the averaged AR for stock  $i$  over the estimation period.  $D_i$  refers to the number of trading day over the estimation period for stock  $i$ .  $R_{m,t(event.period)}$  is the market return on day  $t$ .  $\overline{R}_{m(est.period)}$  is the averaged market return over the estimation period.

Then on day  $t$  in the event window, the total SAR – namely, TSAR - is calculated by summing all SARs across all the stocks under study. Lastly, Equation (3) below is employed to compute the CTSAR for each day in the event window:

$$CTSAR_{T_1, T_2} = \sum_{t=T_1}^{T_2} TSAR_t \quad (3)$$

where  $CTSAR_{T_1, T_2}$  is the CTSAR for each day in the event window.  $TSAR_t$  is the TSAR for each day in the event window.  $T_1$  refers to the first day of the event window or day -15, and  $T_2$  refers to the any day ranging from day -15 to day +15. For each  $t$  in the event window, Equation (4) below is used to compute Z-statistic to test statistical significance of TSARs and CTSARs:

$$Z-TSAR_t = \frac{TSAR_t}{\sqrt{\frac{\sum_{i=1}^N D_i - 2}{D_i - 4}}} \quad (4)$$

$$Z-CTSAR_t = \left( \frac{1}{\sqrt{N}} \right) \left( \frac{\left( \sum_{T_1}^{T_2} SAR_{it} \right)}{\sqrt{(T_2 - T_1 + 1) \left( \frac{D_i - 2}{D_i - 4} \right)}} \right) \quad (5)$$

If the Z-statistics are statistically significant at 95% confidence interval, the credit rating announcements do convey new and relevant information to the public markets, and the sign of abnormal returns determines whether the effect is negative or positive.

### 3.2 Data

The dataset contains 67 listed companies in several industrial sectors that issue debt instruments and receive credit ratings. The list of firms, their ticker symbols, and the date of their rating changes are provided in Appendices A – F. Information on actual rating changes, rating upgrades, and rating downgrades is obtained by a local rating agency, TRIS Rating. Overall, the data comprises 135 events of credit rating adjustments. To calculate CARs, historical data of relevant stocks is collected from 135 trading days before the announcement date to 15 trading days after the announcement date. Twelve-year study period is investigated, which lasts from October 2002 until September 2014. The subprime mortgage crisis period (December 2007 to June 2009) is omitted from the analysis to avoid extreme irregularities in the bond market. In the Stock Exchange of Thailand (SET), all listed companies can be classified into 8 main industry groups, and then further classified into 28 sectors. Such classification is shown in Table 1 below. We use the same classification scheme to group our sampled companies. Note that no companies from the industry of consumer products have experienced credit rating changes during our sampled period.

**Table 1:** This table shows the classification of the industry groups and sectors in the Stock Exchange of Thailand. The symbol for each group and sector is also reported.

Main Industry Groups (and abbreviation)	Sectors (and abbreviation)
(1) Agro and Food Industry (AGRO)	Agribusiness (AGRI)
	Food and Beverage (FOOD)
(2) Consumer Products (CONSUMP)	Fashion (FASHION)
	Home and Office Products (HOME)
	Personal Products and Pharmaceuticals (PERSON)
(3) Financials (FINCIAL)	Banking (BANK)
	Finance and Securities (FIN)
	Insurance (INSUR)
(4) Industrials (INDUS)	Automotive (AUTO)
	Industrial Materials and Machinery (IMM)
	Packaging (PKG)
	Paper and Printing Materials (PAPER)
	Petrochemicals and Chemicals (PETRO)
	Steel (STEEL)
(5) Property & Construction (PROPCON)	Construction Materials (CONMAT)
	Construction Services (CONS)
	Property Development (PROP)
	Property Fund and REITs (PF&REIT)
(6) Resources (RESOURC)	Energy and Utilities (ENERG)
	Mining (MINE)
(7) Services (SERVICE)	Commerce (COMM)
	Health Care Services (HEALTH)
	Media and Publishing (MEDIA)
	Professional Services (PROF)
	Tourism and Leisure (TOURISM)
	Transportation and Logistics (TRANS)
(8) Technology (TECH)	Electronic Components (ETRON)
	Information and Communication Technology (ICT)

#### 4. Results

Tables 2 and 3 show TSARs and CTSARs and their significance over the event window. If the announcement effects of credit rating adjustments exist, we should witness significant TSARs and CTSARs for a number of days over the event window.

Consider first when all industry groups are considered together. Even though TSARs are significant over quite a few days during the event period, these significant TSARs are too scattered to be meaningful. On the contrary, significant CTSARs are clustering around the event date, especially when the rating is downgraded. The direction of the CTSARs in Panel A of Figure 1 implies that Thai firms experience a stock price reduction before the official announcement of credit rating adjustments, possibly due to leakage of information through several sources, e.g., insider information or Rating Outlook/Credit Alert announced by several rating organizations for companies that are highly likely to experience rating changes in the near future. The rebound of stock prices occurs just after the official announcement.

Our results are consistent with Holthausen and Leftwich (1986) and Griffin and Sanvicente (1982) who suggest that downgrades are associated with an abnormally negative stock performance, while announcement of an upgrade will not lead to abnormal stock performance.

When we consider each industry group separately, some interesting results emerge. An opposite asymmetry to the above case can be observed in financial industry group. Many significant CTSARs cluster around the event period in rating upgraded situations, compared to those downgraded cases which have only few significant CTSARs. Surprisingly, investors do not overreact to negative news on financial firms' bond ratings. This signifies a strong confidence that investors have in the financial sector of Thailand. When financial firms experience an improvement in their bond rating, however CTSARs are significantly reduced throughout the event window. A possible explanation is that investors are aware of the information earlier through various channels, e.g., insider information or credit outlook/credit alert announced by several rating agencies, and buy stocks beforehand. Near the event date when bond rating of these firms are about to be upgraded, investors start to sell stocks to realize profits. The oversupply of these stocks during this period cause stock prices to reduce.

The resource industry group experience somewhat different phenomena. Now we do not see any significant CTSARs during the event period for rating downgraded situations. The direction of the CTSARs during the event window is also not clear for downgraded cases. When the rating is upgraded, CTSARs start to be significant and clustered after the event date. These CTSARs are also increasing throughout the event window. These results show that investors do not react to the downgrade in the resource-based industry, but will start buying shares and therefore bid the stock price significantly upward after the official announcement of positive rating changes. Since abnormal returns in this case only become significant after the event date, it implies some good data security measures have been established by resourced-based firms for their bond rating information. These firms do not leak out any good news about their credit rating changes before they become official.

A similar picture to the previous incident emerges for servicing firms, but now the clustering of significant CTSARs mostly occur before the event date and only continues for a couple of days after the event date. Looking at the direction of CTSARs from Panel H of Figure 1, we can see that these CTSARs increases first during the bottom half of the event window, before start to decrease throughout the top half of the event window. This means that investors buy shares of servicing companies before the official announcement of preferable rating changes, perhaps due to weak information security measures in this industry group, and realize profits after the news becomes official.

Apart from financial, resource-based, and servicing industry groups, we cannot draw meaningful conclusions in other industries. TSARs and CTSARs in these industries are either insignificant or significant but too scattered.

Table 2: Significance of TSARs over the event window

Industry group	Overall changes	Ratings upgraded	Ratings downgraded
	Statistically significant days in the event	Statistically significant days in the event	Statistically significant days in the event
All industry groups	-15*, -3**, -1**, 4*, 6*, 12*, 15***	-2*, -1***, 0**	-10*, -9*, -6*, -3*, -2*, 3**, 4***, 15**
FINCIAL	-15*, -12**, -5**, -4*, -3*, 14*, 15*	-12**, -5***, -4*, -1*, 2*,	-9**, -3*, 3**, 4***, 15***
AGRO	-5*, -1**, 6***, 7***,	-5***, 7*, 15**	-5*, -1**, 0*, 5**, 6***, 7***,
INDUS	-3**, 7**, 8*, 13*	Not applicable since all rating changes are downgraded	-3**, 7**, 8*, 13*
PROPCON	12*	12**	-6*, 3**,
RESOURC	-6**, 1***, 6***, 13**	0*, 1**, 5*, 6**, 8*, 13*	1**, 6**, 8**
SERVICE	-6***, 4**, 14*, 15***	-14*, -13*, -9**, -6**, 3**, 6**, 8***, 14**, 15***	-6**, -4*, 0*, 2**, 4**,
TECH	None	2**	15*

Notes: \*, \*\*, and \*\*\* represent significance at the 10 percent, 5 percent, and 1 percent levels respectively.

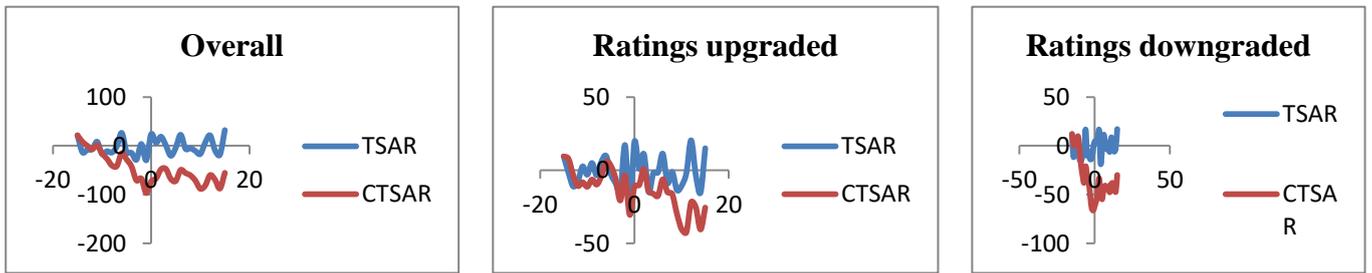
Table 3: Significance of CTSARs of all sampled firms over the event window

Industry group	Overall changes	Ratings upgraded	Ratings downgraded
	Statistically significant days in the event	Statistically significant days in the event	Statistically significant days in the event
All industry groups	-15*, -3*, -1**	None	-15*, -7*, -3*, -2**, -1**, 0**, 1**, 5*,
FINCIAL	-15*, -8*, -7*, -5**, -4***, -3***, -2***, -1***, 0***, 1***, 2**, 3**, 4**, 5**, 6**, 7**, 8**, 9**, 10**, 11**, 12**, 13**, 14**, 15*	-10*, -5**, -4**, -3**, -2**, -1**, 0**, 1**, 2*, 3**, 4*, 5**, 6*, 7*, 8*, 9*, 10*, 11**, 12*, 13*, 14**, 15**	-3*, -2*, 0*, 1*, 2*, 4*,
AGRO	None	None	-5*, -1*
INDUS	None	Not applicable since all rating changes are downgraded	None
PROPCON	None	None	None
RESOURC	2*, 6**, 7**, 8**, 9*, 10*, 11**, 12**, 13***, 14**, 15**	1*, 2*, 3*, 4*, 5**, 6**, 7**, 8**, 9**, 10**, 11**, 12**, 13***, 14**, 15**	None
SERVICE	-6*, -5*	-14**, -10*, -9*, -8**, -7**, -6***, -5***, -4***, -3***, -2**, -1**, 0*, 1**, 2**,	None
TECH	None	None	None

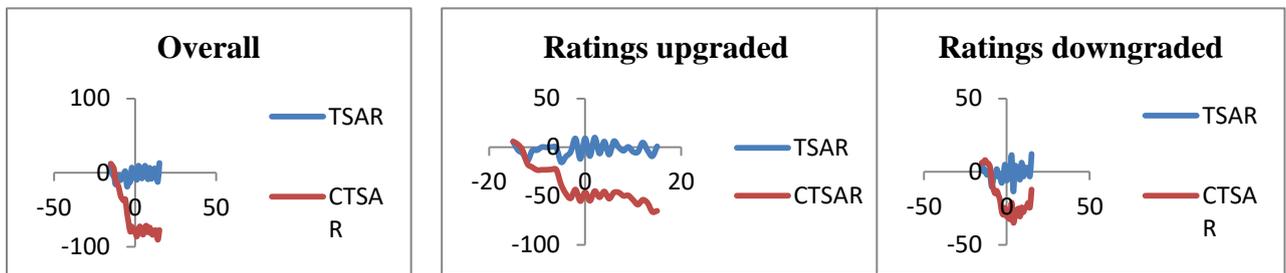
Notes: \*, \*\*, and \*\*\* represent significance at the 10 percent, 5 percent, and 1 percent levels respectively.

**Figure 1: Direction of TSARs and Cum.TSARs over the event window**

**Panel A: All industry groups**

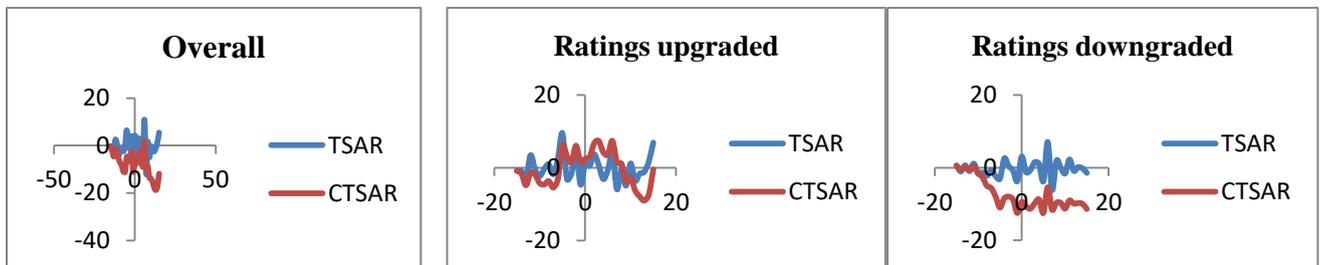


**Panel B: FINCIAL**



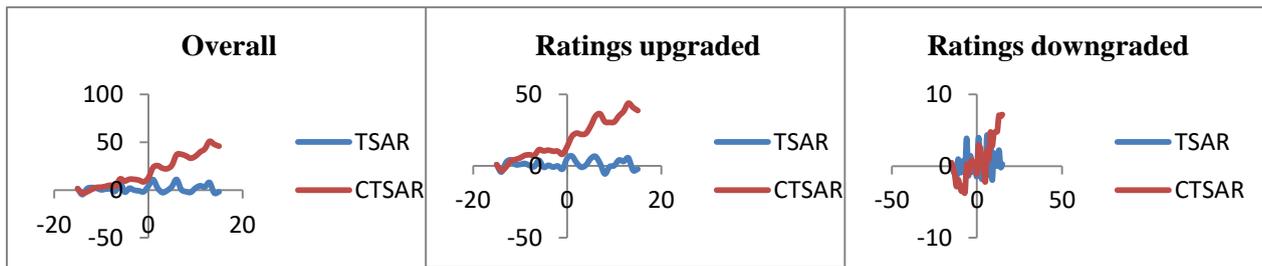
**Figure 1 (continued): Direction of TSARs and Cum.TSARs over the event window**

**Panel C: AGRO**

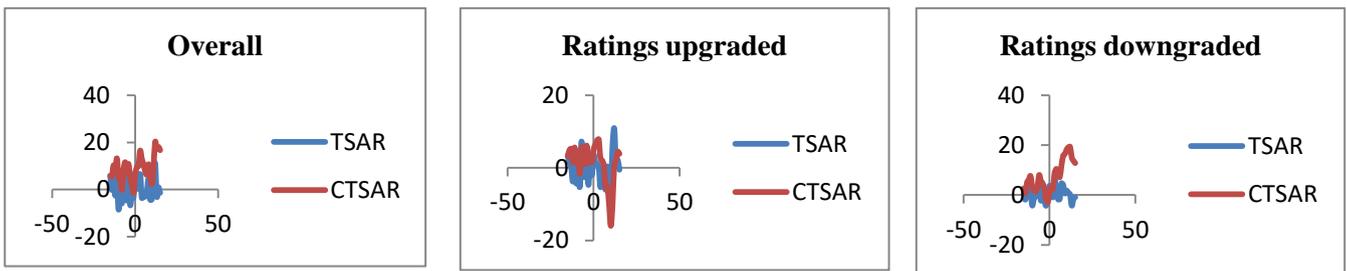


**Panel D: INDUS**



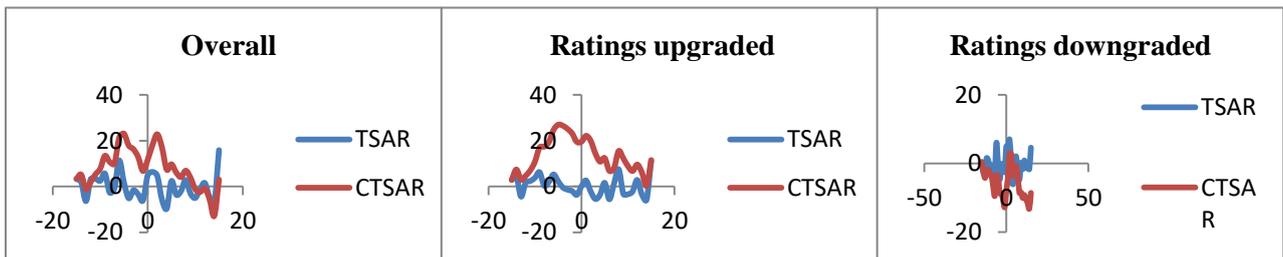


**Panel F: PROPCON**



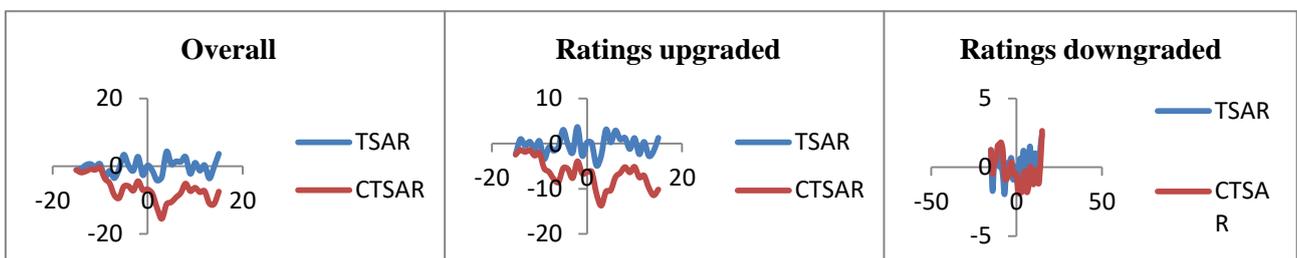
**Panel G: RESOURC**

**Panel H: SERVICE**



**Figure 1 (continued): Direction of TSARs and Cum.TSARs over the event window**

**Panel I: TECH**



## 5. Conclusions

The purpose of this study is to assess the on stock prices before and after credit rating announcements. The case study concentrates on firms listed on the Stock Exchange of Thailand that have been credit-rating adjusted. Event Study Methodology is applied to analyze the data. The subprime mortgage crisis period is omitted from the analysis. What is found in this paper is that the asymmetric stock market response to the announcement of

credit rating upgrades and downgrades as suggested by previous studies still applies to the overall market in Thailand. However, when we concentrate our analysis on each individual industry group, an opposite asymmetry appears. Each industry also displays unique asymmetrical characteristics. Investors do not react to bad news in the financial sector, but respond negatively to good news. In the financial sector, we witness that negative abnormal returns persist throughout the event window. In the resourced-based industry, however, investors respond positively to good news and these positive abnormal returns continue throughout the event period, implying that profit realizing does not occur. On the contrary, shares of servicing companies are bought and their price increases before good news become official. Then, profit realizing takes place after news announcements. We also remark that out of three industries from which we can observe significant and clustering abnormal returns, information security measures are strongest in the resource-based industry given that abnormal returns can only be observed after the official announcement date.

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### APPENDIX A: Rating change announcements in financial sector

Financial								
Company	Rating changes	Announcement date	Company	Rating changes	Announcement date	Company	Rating changes	Announcement date
FNS	BBB to BBB-	8 May 2012	CNS	BBB+ to A	4 Jul 2014	TCAP	BBB+ to A A to A+	14 Jul 2005 16 Jan 2012
AEONTS	A- to BBB-	10 Nov 2006	KBANK	BBB to BBB- BBB- to BB BB to BB+ BB+ to BBB- BBB- to BBB BBB to BBB+	6 May 1998 5 Jul 1999 16 Oct 2002 31 May 2004 11 May 2005 28 Sep 2005	TISCO	BBB+ to A A to A-	7 Nov 2003 25 Sep 2001
AYUD	A- to A	3 Feb 2000	KKP	BBB- to BBB BBB to BBB+ BBB+ to A	29 Nov 2001 21 May 2002 30 Nov 2004	TK	BBB+ to A-	30 Sep 2014
BAY	BBB- to BBB BBB to BBB- BBB- to B+ B+ to BB BB to BBB- BBB- to BBB+ BBB+	8 Jan 1997 17 Sep 1997 7 Oct 1998 24 Jun 2004 28 Sep 2005 20 Dec 2013	KTB	BB to BB- BB- to BB+ BB+ to BBB+ BBB+ to BBB- BBB- to BBB	18 Sep 2003 24 Jun 2004 11 May 2005 28 Sep 2005 28 Apr 2006	TMB	BBB to BBB- BBB- to BB+ BB+ to BBB-	14 Frb 2006 9 Oct 2007 14 Nov 2013
BBL	BBB to BBB- BBB- to BB BB to BB+ BB+ to BBB+	9 Jan 1998 7 Oct 1998 24 Jun 2004 28 Sep 2005	MBKET	BBB+ to A A to AA- AA- to AA	26 Jul 2007 17 Nov 2011 31 Aug 2012	PL	BBB to BBB+ BBB+ to A-	10 Oct 2002 9 Aug 2005
CIMBT	BBB- to BBB BBB to BBB-	13 May 2011 29 Sep 2009	SCB	A to A- A- to BBB- BBB- to B+ B+ to BB- BB- to BB BB to BB+ BB+ to BBB- BBB- to BBB+ BBB+	13 Nov 1995 17 Sep 1997 7 Oct 1998 5 Jul 2001 5 Jun 2003 24 Jun 2004 11 Jul 2005 24 Oct 2006			

Notes: Full company name can be obtained from the official website of the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

#### APPENDIX B: Rating change announcements in property & construction sector

Property & construction					
Company name	Rating changes	Date of announcement	Company name	Rating changes	Date of announcement
AP	BBB+ to A-	21 Jun 2011	MK	BBB to BBB+	05 Mar 2010
CPN	BBB+ to A- A- to A A to A+ A+ to AA	04 Oct 2002 22 Feb 2005 23 May 2007 12 May 2014	NOBLE	BBB to BBB+ BBB+ to BBB	08 Sep 2006 04 Jan 2013
HEMRAJ	A- to A	19 Nov 2014	PS	A- TO A	07 May 2010
LALIN	BBB to BBB+	20 Jun 2013	QH	BBB to BBB+	24 Mar 2004
LH	A to A+	03 Sep 2014	SIRI	BBB to BBB+	05 Feb 2010
MBK	A- to A	01 Feb 2011	SPALI	BBB to BBB+ BBB+ to A A- to A	03 Mar 2006 19 May 2010 18 Jul 2014
WIIK	A- to BBB BBB to NONE	03 Aug 2005 06 Oct 2006	STEC	BBB+ to BBB- BBB to BBB+ BBB+ to A-	18 Aug 2006 08 Oct 2010 05 Jan 2012
ITD	A- to BBB+ BBB+ to BBB BBB to BBB- BB+ to BBB-	13 Sep 2007 06 May 2011 08 Jun 2012 30 Sep 2013	LALIN	BBB to BBB+	20 Jun 2013
ROJNA	BBB+ to A- A- to BBB+	27 Mar 2007 6 Aug 2013	TICON	A- to A	22 Feb 2010

Notes: Full company name can be obtained from the official website of the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

#### APPENDIX C: Rating change announcements in RESOURC

Resources					
Company name	Rating changes	Date of announcement	Company name	Rating changes	Date of announcement
BANPU	A- to A A to A+	14 Jan 2003 07 Nov 2005	GLOW	BBB+ to A-	25 Jul 2013
BCP	BBB+ to AA	12 Oct 2010	SGP	BBB+ to A+ A+ to BBB+ BBB+ to BBB	21 Dec 2011 11 Sep 2012 10 Jan 2014
EGCO	AA- to A+ A+ to AA	28 Oct 2004 11 Nov 2005	PTTEP	AA+ to AAA AAA to AAA- AAA- to AAA	16 Mar 2006 23 May 2012 29 Apr 2013
RATCH	AA to AA+	23 Apr 2013	SPCG	BBB to BBB+	02 May 2014

Notes: Full company name can be obtained from the official website of the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

#### APPENDIX D: Rating change announcements in INDUS

Industrial					
Company name	Rating changes	Date of announcement	Company name	Rating changes	Date of announcement
IVL	A+ to A-	1 Oct 2014	SSI	Negative Negative Negative	23 Dec 2005 19 Oct 2006 13 Feb 2007

Notes: Full company name can be obtained from the official website of the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

#### APPENDIX E: Rating change announcements in SERVICE

Services					
Company name	Rating changes	Date of announcement	Company name	Rating changes	Date of announcement
BECL	A- to A	6 May 2010	RCL	BBB to BBB+ BBB+ to BBB BBB to BB+	30 May 2003 30 Jun 2011 13 May 2013
BTS	A to A-	26 Apr 2013	THAI	A to A+	17 Dec 2010
LOXLEY	Negative Negative Negative	7 Dec 2005 12 Oct 2006 12 Oct 2007	SINGER	Positive	21 Feb 2006
CENDEL	Negative Positive	26 Aug 2010 9 Aug 2013	BDMS	Positive	17 Mar 2011 27 Oct 2014
HMPRO	Positive	18 Nov 2011	NMG	Positive	14 Oct 2014

Notes: Full company name can be obtained from the official website of the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

#### APPENDIX F: Rating change announcements in TECH

Technology					
Company name	Rating changes	Date of announcement	Company name	Rating changes	Date of announcement
DTAC	A+ to AA- AA- to AA	15 Oct 2010 3 Apr 2014	ADVANC	AA- to AA	31 Oct 2001
TRUE	BBB to BBB+	9 Oct 2014	SAMART	BBB+ to BBB- BBB+ to BBB	20 Mar 2014 1 Apr 2011
THCOM	BBB+ to A-	6 Jun 2014			

Notes: Full company name can be obtained from the official website of the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

#### APPENDIX G: Rating change announcements in AGRO

Agro & food industry					
Company name	Rating changes	Date of announcement	Company name	Rating changes	Date of announcement
CPF	Negative Positive Positive Positive Positive	28 May 2004 2 May 2005 30 Sep 2010 19 May 2011 20 Jun 2014	ASIAN	Negative Negative	1 Oct 2008 10 Apr 2009
STA	Positive Positive	9 Dec 2010 19 Aug 2011	SST	Negative Negative	25 Sep 2012 25 Jul 2014

TU	Positive	29 Jul 2010	KSL	Positive	13 Nov 2013
MINT	Positive	28 Apr 2014			

Notes: Full company name can be obtained from the official website of the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

# CORPORATE GOVERNANCE, FIRM PERFORMANCE AND FIRM VALUE OF LISTED COMPANIES IN VIETNAM

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## Abstract

This study examines the impact of corporate governance on firm performance. In addition, the study distinguishes itself from current literature by examining the moderating effect of corporate governance on the association between firm performance and firm value. We find that corporate governance in general is positively related to firm performance. The valuable findings wake up perception of both investors and listed companies about the importance of good corporate governance to the sustainable business development. The findings also reveal a moderating impact of corporate governance on the association between firm performance and firm value of the study in which corporate governance performance is found to strengthen the positive association between firm performance and firm value. From our result analysis, implications for investors, managers and policy makers have been suggested.

**Keywords:** *Corporate Governance, Firm Performance, Firm Value, Moderating Effect, Vietnam Stock Market*

## 1. Introduction

Over the last few decades, corporate governance has gradually asserted its important role in the image's creation and development of business organizations. Corporate governance focuses on the structures and processes for the business direction and management of firms. It involves the relationships among company's controlling system, roles of its board directors, shareholders, and stakeholders. Good corporate governance practices not only promote activities and enhance the competence to access external capital for enterprises but also improve the business value, minimize the enterprise risks, and intensify the investment and sustainable growth for the companies and economies. In contrast, according to Bijan (1998), one of the major causes leading to the Asia's financial crisis was poor corporate governance. Then, Marcia, Jamie and Hassan (2009) posited that "corporate governance variables had a significant impact on market returns for the largest banks and not as much for smaller banks".

Corporate governance has turned out to be a key area of reform since the financial crisis 1997-1998 in East Asia and the 2008 global crisis. Following this trend, in Vietnam, after nearly 30 years of innovation, along with the process of improving business environment, corporate governance framework has been gradually built, replenished and comprehended. So far, corporate governance regulations in Vietnam are recorded basically in accordance with the international requirements and principles of governance. Nevertheless, corporate governance practices still remain many limitations and shortcomings. International Finance Corporation (IFC) conducted a project of Vietnam Corporate Governance Scorecard for the years 2009, 2010 and 2011, which drew the general awareness and understanding on corporate governance in Vietnam. According to this project, average scores of corporate governance score raised marginally from 2009 to 2010 before declining to 42.5% in 2011. Significantly, the increasing number of companies having score below average in 2011 reckoned a regression of corporate governance practices in the country. Scores on Board of director's responsibility, information disclosure and the transparency in operations were moderately low. These issues in the practice of Corporate Governance in Vietnam are one of the reasons for us to conduct this research.

In theoretical terms, a famous research series conducted by La Porta, Lopez - de- Silanes, Shleifer and Vishny (2000) have confirmed the positive aspects of Corporate Governance. Specifically, countries with stronger legal protections of minority shareholders would have larger securities markets, less concentrated share ownership, and a higher value for minority shares. As a result, corporate governance performance and its effects on firm performance as well as firm value have been observed by a great number of theorists and researchers. Specifically, Black, Jang and Kim (2003) show that corporate governance is a prominent factor explaining the market value of Korean public. Additionally, Lefort and Walker (2005); Chong and López-de-Silanes (2006); Garay& González (2005, 2008) find that firm value has a positive association between market value of firm and governance in Latin American countries. Besides, other emerging markets have paid a lot of attentions to research on this special issue. For instance, Cheung et al. (2014) investigated the relation between the quality of corporate governance practices and market valuation for listed firms in five Asian emerging markets namely China, Hong Kong, Indonesia, the Philippines, and Thailand. Then, the empirical findings posit a positive association between the quality of corporate governance practices and firm value. In Vietnam, the relationship between corporate governance and performance in Vietnamese commercial banks was examined by Dao and Hoang (2012), which concluded the great impact of the number of Board of Director's members on bank performance. Moreover, as mentioned in Vo and Nguyen (2014), corporate governance variables including a dual role of the CEO, board's size, board independence and ownership concentration were taken into account to analyze the relationship with firm performance. However, the study point outs multiple effect of corporate governance on firm performance. Le and Nguyen (2012) constructed the research about "corporate governance and business performance of 60 financial institutions in Vietnam" and eventually found that corporate governance index is positively related to firm performance. Therefore, from both practice and initial limited number of researches on corporate governance in Vietnam, the authors raise a first research question ***"Is there a positive relationship between corporate governance performance and firm performance?"***

In addition, many researchers, especially in management, did not emphasize the difference between firm performance and firm value and even used them interchangeably. Nevertheless, in our research, firm performance refers to accounting-based performance or accounting returns, while firm value is market-based performance. Few studies such as Le and Chizema (2012) explored the relationship between firm performance and firm value for the case of Chinese listed firms and Erik and Sigit (2013) in the case of Indonesia listed firms. More specifically, following the moderating effect approach of some papers (e.g. Le and Chizema, 2012) in which the authors found that investors might have considered state ownership (a governance factor) of firms in investing in the firms based on the signaling effect of the state ownership. This may leave room for research on the possible impact of corporate governance on the relationship between firm performance and firm value. Therefore, the study distinguishes itself from current literature by examining the moderating effect in a second research question ***"Does corporate governance performance have a moderating effect on the relationship between firm performance and firm value on Vietnam stock market?"***

The paper is organized in five main sections. The first section presents the rationale as well as research questions. The following part presents a review of the relevant literature which provides key concepts, previous studies related to this research, especially theoretical framework that could be applied. Research methodology, data analysis and findings and conclusions are consecutively reported in the last three sections.

## 2. Literature Review

### 2.1 Emergence and meanings of corporate governance

Due to the increasing scale and complexity of enterprises, the owners delegate their rights to managers, who should principally work in the interests and under control of shareholders (Clarke, 2004). Simultaneously, there is a great concern that how to ensure about the acts of managers adhering the interests of financial suppliers. Therefore, “corporate governance to a large extent is a set of mechanisms through which outside investors protect themselves against expropriation by the insiders” (La Porta, et al.,2000). Considering from a stakeholder point of view, Monks and Minow (1996) defined corporate governance as “the relationship among various participants in determining the direction and performance of corporation”.

As has been noted in OECD Principles, “corporate governance is one key element in improving economic efficiency and growth as well as enhancing investor confidence”. Especially, OECD claims that corporations *must innovate and adapt their corporate governance practices so that they can meet new demands and grasp new opportunities to remain competitive in a changing world.*

The process of privatization and the development of the stock market in Vietnam have recently revealed a number corporate governance issues. Since the promulgation of Enterprise law in 2005, Vietnam expresses the determination of reforming the legal framework regarding corporate governance practices through various documents and new rules to guarantee the consistence with international standards-OECD principles. On 26 July 2012, the Ministry of Finance issued Circular 121/2012/TT-BTC about applicable corporate governance to public companies which introduced some new provisions aimed at improving corporate governance.

### 2.2 Signaling theory (information problem theory)

Signaling theory focuses on the perception of investors when they (individuals or organizations) have access to different information. Under information asymmetry, corporations with superior information transparency signal better corporate governance (Chiang, 2005). Since almost all of investors rely on the public information to decide whether to invest or not (Poitevin, 1990; Ravid and Saring, 1991). Then, Yi et al. (2011) and Spence (1973) suggest that the company can provide information to investors in order to eliminate the information asymmetry existing between managers and investors which would attract more investments.

### 2.3 Corporate governance practices and firm performance

There are a growing number of literatures in financial field emphasizing the linkage between corporate governance performance and firm performance. In general, previous studies show that good governance practices have led to significant growth, higher productivity of companies, and hence lower risk of systematic financial failure for countries.

Due to the high economic growth prospects and continuing enhancement physical and legal infrastructures, emerging markets play a key position in the global economy. From investors' perspective, emerging markets offer many attractive opportunities, although they still contain some multifaceted risks at the country and company levels. From the research of 374

companies in 14 emerging markets, Klapper and Love (2004) indicate that corporate governance has positive relationship with firm performance. It is explained that companies with higher corporate governance scores have more efficiency compared to firms with lower corporate governance performance. Nevertheless, country-specific researches on emerging markets have supplied mixed results, suggesting that empirical evidence on the relationship between corporate governance indicators and firm performance in emerging markets is inconclusive.

In Vietnam, Vo and Nguyen (2014) point out that multiple effects of corporate governance on firm performance (ROA, ROE) by examining 177 listed companies in Vietnam for the period from 2008 to 2012. The first two leading findings include the positive correlation between duality role of the CEO and firm performance and a structural change in relation between managerial ownership and firm performance. In addition, board independence has opposite impacts on firm performance. However, the paper fails to provide the empirical statistical evidence in supporting the linkage between board size and firm performance. Nguyen (2011) investigated 100 Vietnamese firms but then stated that corporate governance in Vietnam has little impact on firm performance.

It therefore means that there is at odds with an equilibrium situation when performance could be enhanced by making changes to the governance arrangements, if governance and firm performance were associated. From an optimistic perspective, the paper assumes a positive impact of corporate governance on firm performance in Vietnam.

*Hypothesis 1: Corporate governance performance has a positive association with firm performance on Vietnam stock market*

#### *2.4 Firm performance and firm value*

Financial performance, which assesses the fulfillment of the firm's economic aims, has long been a central concentration in academic research (Barney, 2002; Combs et al., 2005; Hult et al., 2008; Richard et al., 2009). Starting in the mid- 1980s, financial theories and market-based measures were introduced into management studies (e.g: Lubatkin and Shrieves, 1986; Bromiley, 1990). Promoted by the increase of shareholder activism, the adoption and use of market-based measures has been employed since the early 1990s which led to a number of debates on the relative strengths of accounting measures (ROA, ROE, etc...) and market measures, namely Tobin's Q.

In Brazil, in an article comparing the relations between the indicators of profitability and Q de Tobin, Anderson and Edilson (2012) confirm that the profitability indicators (ROA, ROE) have a strong association with the value of Tobin's q at a significance level of 1%. This finding can be explained that the indicators obtained in the accounting balance sheet explaining the value of Tobin's q approach. Similarly, Erik, Sigit and Yuyu (2013) developed a model to consider the "Effect of Return on Assets (ROA) Against Tobin's Q" by analyzing Indonesia Stock Exchange Years from 2007 to 2011. Through their research, it is found that ROA has a significant relationship with Tobin's q, which is in line with the study by Dodd and Chen (1996), Uchida (2006) Ulupui (2007) Carlson and Bathala (1997) but not in line with Irwansyah Priest (2002).

In regards to US market, although a few scholars (e.g., Chakravarthy, 1986) state that accounting and market measures are unrelated due to the inconsistency between achieving short-term and long-term economic goals, many researchers expect them to be correlated,

either positively or negatively. Hoskinsson (1994) contend that there is a positive association on the basis of relative stability of firm performance which presents past and current performance of a company and firm value reflecting the future performance. Since historical performance is a good predictor for future performance in some certain facets.

After discussing literature based on previously conducted research, the second hypothesis is formulated as follows.

*Hypothesis 2: Firm performance has a positive linkage with firm value on Vietnam stock market*

### *2.5 The Signaling Effect of Corporate governance on the firm's Performance-value Relationship*

In emerging markets, it is concluded that a positive correlation between Tobin's q (market value of the firm) and total corporate governance scores of emerging market MNEs, i.e. when there is better corporate governance within the firms, the market value of firms increase (Ficici and Aybar, 2012). Equally important, as mentioned in Dowell, Hart and Yeung (2000), "adopting a single, stringent global environmental standard have higher market values, as measured by Tobin's q, than firms defaulting to less stringent, or poorly enforced host country standards, and perhaps, less competitive firms." In a similar research, Black (2001) reports a strong association between the market value and corporate governance of Russian firms. Specifically, the improvement in governance performance is found to increase the market value of a Russian firm by 700 times (70,000%). However, Black is critical of possible biases related to very small sample size (21 firms) and the ignorance of controlling for endogeneity. In China, Bai, C. et al. (2002) identify a comprehensive set of governance mechanisms for China's listed companies and construct relevant measures for each of them, named the G index, to reflect the overall level of governance practice for China's listed companies. Their finding was that better-governed companies are associated with higher stock market valuation. Correspondingly, Chinese investors are willing to pay a significant premium for better governed firms.

Taking an observation in extend of Vietnam, Vo (2013) investigated the relationship between corporate governance and firm value of firms listed in Ho Chi Minh City Stock exchange, which is one the vanguard study in this area. Similar to other foreign preceding papers, the result indicates that a positive association of board size and the value of a firm. Simultaneously, while there is a shortage of significant negative linkage of other two independent corporate governance variables (shareholder concentration and CEO duality) and the value of a firm. It implies that too high ownership concentration and CEO duality would have negative impacts to the firm value. Another considerable finding is that there are positive impacts of control variables such as price-to-book value ratio, and return on total assets on firm value; whereas the market capitalization has a negative relationship with the value of a firm.

Other studies examine the relationship between corporate governance and firm value by focusing on the issue of transparency from investors' perspective. According to Perotti and Von (1998), corporate transparency has positive value implications because investors can access meaningful information in their investment's decision. On the other hand, in the study of market valuation and performance of US firms during 1990–2003, Bebchuk et al. (2009) postulated a negative relation between the governance index scores and firm valuation measured by Tobin's Q.

In short, combined with hypothesis 1, although the positive linkage between corporate governance and firm performance/ firm value are supposed, these empirical papers might not pay sufficient attention to how the investors evaluate firms in terms of taking corporate governance into their consideration.

A high level of firm performance (as measured by accounting returns) may not be translated into a high market value of firm when the firm possesses a poor corporate governance system. To clarify the above argument, consideration of the signaling effect of corporate governance should be a good lens. Additionally, tracking the relationship between corporate governance performance (corporate governance index) and firm performance is a stepping-stone to further discover the complex association between two mentioned variables and firm value in Vietnam context. The authors suppose that together with firm performance (reported accounting returns), corporate governance has a signaling effect on firm performance-firm value association. Moreover, the influence of corporate governance on performance of the company may signal to investors to ascertain the accurate market value of the company. Accordingly, our third hypothesis is suggested as follows:

*Hypothesis 3: Corporate governance performance has a moderating effect on the relationship between firm performance and firm value on Vietnam stock market. Specifically, corporate governance will strengthen the linkage between firm performance and firm value.*

### **3. Methodology**

#### *3.1 Sample characteristics*

This paper focuses on researching 100 largest companies listed on Vietnamese Stock market which represent more than 80% total market capitalization in three consecutive years 2015, 2016 and 2017. In details, the selected 100 companies comprise 80 ones listed on Ho Chi Minh Stock Exchange (HOSE) and 20 ones listed on Hanoi Stock Exchnage (HNX). Accounting data are collected from famous and popular stock websites including: Ha Noi and Ho Chi Minh Stock Exchange official website: <http://www.hnx.vn>; <http://www.hsx.vn> respectively, CafeF.com and cophieu68.com. In addition, the governance data is gathered from public available information: company's charter, annual reports, audited financial statements, corporate governance reports, notices for the AGM (Annual General Meeting of Shareholders), reports on results of AGM, AGM minutes, company website.

After collecting all necessary data, detecting outliers is carried out by Mahalanobis distance method. As a result, there are 93, 90 and 93 remaining companies in 2015, 2016 and 2017, respectively.

#### *3.2 Measures*

##### *3.2.1 Independent variable - Corporate governance measure*

Far from utilizing questionnaires filled by listed firms which contain the problems of low response rate and even self-report bias, this paper applies Garay and González (2008) approach, which was applied in the research of Le and Nguyen (2012) for corporate governance and firm performance, to construct a corporate governance checklist, namely corporate governance index, encompassing 17 questions answered by the authors based on public available information. Especially, these questions are modified firmly on the adherence of current Vietnamese corporate governance regulations such as: Circular

52/2012/TT-BTC, Circular 121/2012/TT-BTC; OECD principles as well as international standards. The index unearths four subcategory indexes corresponding with various aspects of corporate governance. Sub-index-1 focuses on disclosure (five questions); sub-index-2 addresses composition and performance of the board of directors (five questions); sub-index-3 measures ethics and conflicts of interest (three questions) and finally sub-index-4 assesses shareholders' rights (four questions). The format answer of each question is either "Yes" or "No." If the answer is "Yes," 1 will be added; otherwise if the answer is "No," 0 is recorded. Then, overall CGI of each company is calculated by average score of 17 questions.

### *3.2.2 Dependent variables*

*Firm performance* is measured by two performance proxies based on accounting data: Return on asset (ROA) and Return on equity (ROE). In the paper, ROA is calculated by the ratio of earnings before interest and tax to total assets. ROE is determined by the percentage of earnings before interest and tax to equity. All return indicators are based on the earnings before interest and taxes (EBIT) due to its neutrality to leverage and tax treatment. The two ratios are widely used to measure firm performance in studies by Brown and Clayor (2004); Klapper and Love (2004); Bhagat and Bolton (2008), Hu and Izumida (2008); Le & Buck (2011); Wang and Xiao (2011). ROA and ROE indicate the effectiveness in using total asset and equity of firms. In view of other facet, while both ROE and ROA have their own shortcomings as a proxy to firm performance, it is suggested that the two proxies should be used in turn to get better insights into the firm performance.

*Firm value (Tobin's q)*. The authors also use Tobin's q which is an important and typical accepted measure of corporate firm value. Following the computation of Anurag and Liping (2013), Tobin's-Q is defined as the ratio of market value of total equity to book value of total equity at the end of its fiscal year. This indicator is a tool to clarify a number of diverse corporate phenomena such as cross-sectional differences in investment and diversification decisions, the relationship between managerial equity ownership and firm value. Clearly, Tobin's q, which partly reflects the future expectations of investors on a listed firm, has been popular with some certain research like Doidge, Karolyi and Stulz's (2001), Demsetz and Villalonga (2001) and Wei et al., (2005)

### *3.2.3 Control variables*

Firm size and leverage are utilized as control variables. While leverage is known as debt-to-equity ratio (Cho 1998; Konijn, Kräussl and Lucas 2011); Mansi and Reeb 2002; Thomsen & Pedersen 2000); natural logarithm of book value of total assets determines size of company (Berger & Ofek 1995; Chen & Ho 2000). It is undeniable that firm size indicates the capital intensities and scale economies which may be associated with firm profitability (Gedajlovic & Shapiro, 2002).

Table 1: Descriptive statistic

	Minimum			Maximum			Mean			Std. Deviation		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
CGI	0.177	0.235	0.294	0.647	0.706	0.706	0.419	0.465	0.490	0.103	0.095	0.088
ROA	-0.100	-0.071	-0.122	0.388	0.264	0.298	0.100	0.078	0.071	0.096	0.067	0.068
ROE	-0.133	-0.473	-0.296	1.215	0.941	0.948	0.253	0.193	0.192	0.236	0.216	0.195
Tobin's q	0.226	-0.656	0.330	4.189	2.680	4.201	0.858	0.860	1.099	0.632	0.513	0.665
Size	13.338	13.395	13.458	19.720	19.843	20.172	15.329	15.330	15.508	1.198	1.207	1.358
Leverage	0.019	-5.605	0.033	11.800	11.259	12.869	1.849	1.790	2.020	2.289	2.301	2.614

## 4. Data Analysis and Findings

### 4.1 Descriptive statistic

According to table 1, two firm performance variables, ROA and ROE, experienced a downward trend with relative low average- value over the three years observed. Even the minimum ROA and ROE in the three years are negative numbers. In 2015, while ROE reached the highest value at 1.215; the highest number, 0.388, seems to be moderate for ROA. Contrastingly, firm value variable, Tobin's q has a rather upward trend with 0.858; 0.860 and 1.099 in 2015, 2016 and 2017 respectively. At the same time, two control variables comprising firm size and leverage remain stable in mean value at around 15.3 for size and 2 for financial leverage. The huge gap between maximum and minimum value of leverage indicates the difference in capital structure of observed listed firms. In view of firm size, the largest one is 20.172, whereas the smallest one is 13.338. Referring to the table, overall, since the sample listed companies are encompassed from disparate industries, all variables fluctuate at relatively high standard deviation which is above 6.7%.

#### *\*Descriptive statistic of CGI*

Table 2: Overall CGI and average value of four sub-indexes

Items	2015	2016	2017
<b>Overall CGI</b>	<b>41.87%</b>	<b>46.47%</b>	<b>48.96%</b>
<b>Sub-indexes</b>			
<b>1. Disclosure</b>	43.23%	50.67%	52.04%
<b>2. Composition and performance of the Board of Directors</b>	49.03%	53.78%	58.06%
<b>3. Ethics and conflicts of interest</b>	25.81%	32.22%	36.20%
<b>4. Shareholders' rights</b>	43.28%	42.78%	43.28%

As shown in table 2, both overall CG score and each sub-index have positive trends through three years. In comparison with overall CGI of the year 2015 in IFC scorecard, there is a minimal difference between this research (41.87%) and IFC (42.5%). Despite the suffering from an economic downturn in 2015, general corporate governance performance of public firms in 2016 still gains 4.6% rise to reach 46.47%. The plausible reason for this increase is

that the issuance of Circular 121/2012/TT-BTC updating the CG guidelines and Circular 52/2012/TT-BTC guiding the disclosure of information on securities market boost all listed companies improve their CG. Following the increasing tendency, 2017's overall CGI, 48.96%, partly proves the great efforts of public firms to adhere new regulations.

According to the disclosure, the considerable growth, around 7%, from 2015 to 2016 happened prior to the moderate increase with just about 2% between 2016 and 2017. Likewise, there is a steady value, approximately 43%, for the shareholders' rights. Contrastingly, researched firms did not put more attention in view of ethics and conflicts of interest, which led to the pessimistic results, only 25.81% in 2015; 32.22% in 2016; and 36.20% in 2017.

In short, only around the half number of observed companies comply with the requirements of disclosure; and composition and performance of the board of directors. Simultaneously, it is advised that more improvements have to put in terms of shareholders' rights; and especially ethics and conflicts of interest.

#### 4.2 Correlation and heteroskedasticity analysis

The authors also carried out correlation analysis and the results showed that there was no high correlation among independent and control variables. Additionally, the Variance Inflation Factor (VIF) of all variables is smaller than the threshold of 10 specified by Neter et al. (1996). Therefore, multicollinearity does not appear to be a problem.

At the same time, test of heteroskedasticity does not show any troubles. Thus, OLS regression can be applied for further analysis.

#### 4.3 Regression results

##### 4.3.1 Association between corporate governance performance and firm performance

After running hierarchical regression, the connection of the two control variables (firm size and leverage) and the independent variable CGI with firm performance, namely ROA in three consecutive years: 2015, 2016 and 2017 are indicated in table 3.

Variable	2015		2016		2017	
	Sub-Model 1a	Model 1a	Sub-Model 1b	Model 1b	Sub-Model 1c	Model 1c
Intercept	0.089	0.075	0.160	0.178	-0.077	-0.103
Size	0.002	-0.005	-0.005	-0.011	0.011	0.008
Leverage	-0.007	-0.006	-0.003	-0.002	-0.008*	-0.009*
CGI		0.281**		0.159**		0.140
$\Delta R^2$		0.087		0.044		0.027
F-statistic change		8.707***		4.045**		2.550
$R^2$	0.026	0.113	0.031	0.075	0.040	0.067
Adjusted $R^2$	0.005	0.083	0.009	0.043	0.019	0.035
N=	93		90		93	

Dependent variable: ROA

Note: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ ; \*\*\*\*  $p < 0.001$

Apart from the negative relationship ( $p < 0.1$ ) between the control variable, leverage, and firm performance, ROA in 2017 shown in sub-model 1c; it can be concluded that there are no significant associations between the two control variables and ROA. Similar to Le and

Nguyen (2012); Vo and Phan (2013), firm size does not relate to ROA on Vietnam stock market.

Corporate governance performance (CGI) is added to Model 1a (2015), Model 1b (2016) and Model 1c (2017). The adjusted R-square obviously increases indicating that the added variable contributes much in explaining the variation in the data. The positive significant relationships ( $p < 0.05$ ) between CGI and ROA are found in the year of 2015 and 2016 supporting for Hypothesis 1 (H1) about corporate governance performance and firm performance. On the contrary, H1 is not corroborated due to the insignificant result of year 2017. Therefore, CGI-ROA relation is inconclusive.

In regard to the second firm performance variable, ROE, in general, despite the only positive significant association of firm size and ROE in 2017, it can be stated that there is no relationship between size of firm and ROE illustrated in year 2015 and 2016. However, the consistent findings of the three consecutive years show the positive significance in leverage-ROE linkage at  $p < 0.001$ . To be more specific, regression analysis outcomes in table 4 point out a positive statistical significance on the relation of CGI and ROE in all three observed years. Thus, H1 is absolutely supported, meaning that corporate governance performance is positively associated with ROE.

Variable	2015		2016		2017	
	Sub-Model 2a	Model 2a	Sub-Model 2b	Model 2b	Sub-Model 2c	Model 2c
Intercept	0.056	0.029	-0.047	0.004	-0.318	-0.379
Size	0.004	-0.008	0.009	-0.008	0.027*	0.021
Leverage	0.069****	0.072****	0.054****	0.057****	0.042****	0.041****
CGI		0.524***		0.438**		0.332*
$\Delta R^2$		0.050		0.032		0.019
F-statistic change		9.386***		4.668**		3.640*
$R^2$	0.475	0.525	0.376	0.408	0.528	0.547
Adjusted $R^2$	0.463	0.509	0.362	0.387	0.518	0.531
N=	93		90		93	
Dependent variable: ROE						
Note: * $p < 0.1$ ; ** $p < 0.05$ ; *** $p < 0.01$ ; **** $p < 0.001$						

### 4.3.2 Relationship between firm performance and firm value

Table 5: Results of regression analysis for firm performance-firm value

Variable	2015			2016			2017		
	Sub-Model 3a	Model 3a	Model 4a	Sub-Model 3b	Model 3b	Model 4b	Sub-Model 3c	Model 3c	Model 4c
Intercept	-2.941**	-3.083***	-2.976**	0.145	-0.388	0.187	-2.295**	-1.945****	-1.669
Size	0.258***	0.256***	0.256***	0.043	0.060	0.035	0.233***	0.184***	0.179**
Leverage	-0.088**	-0.076*	-0.132***	0.028	0.037	-0.020	-0.105**	-0.069*	-0.189****
ROA		1.600**			3.340****			4.524****	
ROE			0.635*			0.890***			1.968****
$\Delta R^2$		0.058	0.030		0.185	0.088		0.207	0.156
F-statistic change		6.201**	3.059*		20.760****	8.705***		26.401****	18.631****
$R^2$	0.111	0.169	0.141	0.045	0.230	0.133	0.095	0.302	0.251

Dependent variable: Tobin's Q

Note: \* p<0.1; \*\* p<0.05; \*\*\* p<0.01; \*\*\*\* p<0.001

Table 5 shows the empirical results to confirm whether firm performance (ROA and ROE) has positively relation with firm value (Tobin's Q) (H2). In the same approach with H1 analysis, firm size and leverage are also used to control the linkage of performance-value of listed firms. The two control variables are reported in inconclusive relationships with Tobin's q. In 2015 and 2017, while there are positive connections between firm size and Tobin's q at p<0.01, leverage is found to be negatively related with Tobin's q at p<0.05. However, the year 2016 witnessed no connection of both firm size and leverage on Tobin's Q.

Focusing on the bottom-line target for ROA/ROE – Tobin's q association tracking, it can be claimed that H2 is supported through the definite significant positive relations between two firm performance variables and firm value variable. In addition, ROA is higher correlation with Tobin's q with beta value: 1.6; 3.34 and 4.524 in 2015, 2016 and 2017 respectively; in comparison with lower beta value between ROE and Tobin's q at 0.635 in 2015; 0.89 in 2016 and 1.968 in 2017.

### 4.3.3 Moderating impact of corporate governance on the linkage of firm performance and firm value

Table 6 represented the moderating effect of corporate governance on the positive relationship between firm performance and firm value. The interaction terms, CGI\*ROA, in Model 5a and 5b and CGI\*ROE in Model 6a, 6b and 6c are all appeared to be insignificance with dependent variable, Tobin's q, except for the only positive association between interaction terms (ROA\*CGI) and Tobin's q in Model 5c for the year 2017. Then, H3 is just accepted in one year, 2017.

Table 6: Results of regression analysis for moderating effect of corporate governance performance on the relationship of firm performance-firm value

	2015			2016			2017		
	Sub-model 3a	Model 5a	Model 6a	Sub-model 3b	Model 5b	Model 6b	Sub-model 3c	Model 5c	Model 6c
Intercept	-2.941**	-2.713	-2.851**	0.145	-0.092	-0.127	-2.295**	-1.028	-1.716
Size	0.258***	0.249	0.250**	.043	0.066	0.035	0.233***	0.182**	0.180**

			*						
Leverage	-0.088**	-0.070	-0.134** *	0.028	0.035	0.002	-0.105**	-0.057	-0.177****
CGI		-0.688	-0.047		-0.837	0.636		-1.894*	-0.014
ROA		-3.112			-1.422			-5.220	
ROA*CGI		10.918			10.176			20.400*	
ROE			-0.087			2.201* *			2.934
ROE*CGI			1.532			-2.837			-1.795
$\Delta R^2$		0.078	0.035		0.195	0.103		0.235	0.161
F-statistic change		2.798* *	1.181		7.209** **	3.405* *		10.176****	6.267***
$R^2$	0.111	0.189	0.146	0.045	0.240	0.148	0.095	0.330	0.256
Adjusted $R^2$	0.091	0.143	0.097	0.023	0.195	0.098	0.075	0.291	0.213
N=	93			90			93		
Dependent variable: Tobin's Q									
Note: * p<0.1; ** p<0.05; *** p<0.01; **** p <0.001									

## 5. Discussion and Conclusion

Vietnam overall corporate governance score is not as high as many other Asia nations. However, the increasing overall corporate governance score of listed companies is a positive tendency for a volatility stock market as Vietnam. Hence, it is indisputable that Vietnamese listed firms has adhered relatively well the corporate governance regulations to gradually improve and keep pace with international corporate governance standards. Among four researched aspects of corporate governance, the issues of shareholder's rights and particularly, ethics and conflicts of interest have to enhance urgently to break out of the current low quality.

The empirical results generally support a positive correlation between corporate governance performance and firm performance. The paper reveals that listed companies with better observed corporate governance practices or scores demonstrate better accounting returns. Good corporate governance system assists a firm in efficient, logical and tight management to truly build strong business operations. Hence, this finding provides empirical evidence for listed firms in enhancing their awareness about the development of a corporate governance mechanism for achieving outstanding company performance instead of accounting manipulation to attract investors.

Significantly, although the positive relationship between firm performance and firm value is absolutely confirmed by researched data, the moderating impact of corporate governance on the firm performance-firm value relation just reveals in one year, 2017. In reality, ROA and ROE are two financial indicators reporting business performance during current accounting period, whereas Tobin's q represents the company's future performance because it reflects investors' expectation for future potential profit of the firms, called stock price. As a result,

the good past and current accounting returns are relatively solid foundation to highly assess market value of a particular listed firm. However, not as hypothesized, corporate governance does not appear to have a significant moderating impact on firm performance-firm value association in case of Vietnam stock. Accordingly, it can be concluded that security investors on Vietnam stock market still do not perceive the important strengthening effect of corporate governance in the positive relationship between accounting returns and market value of firm. The reason is that corporate governance seems to be a new concept with investors, especially domestic ones who are familiar with financial ratio analysis or herding style in stock investment. To boost the rapid development of Vietnam stock market, corporate governance plays a connective role to transfer overall picture of listed firms to investors through the transparency of information, equitable shareholders' rights, composition and responsibilities of Board of Director and elimination of conflicts of interests. Then, some certain stocks would not be overvalued and eventually reduce risk for investors. Interestingly, the moderating effect of corporate governance in 2017 asserts the effectiveness of corporate governance circulars issued at the end of 2016 in terms of waking up awareness of investors about the importance of corporate governance in security investment. This finding implies that for a given high accounting return, the firm would gain the maximum market value in case of high corporate governance level; and just medium market value in case of low corporate governance level. Additionally, at low corporate governance performance, the listed firm is able to fall to the lowest market value related to its low firm performance.

Although this research was carefully prepared, its limitations still appear as any applied study. First of all, due to the limited sample size of just 100 largest listed companies, the research findings do not involve a number of medium and small listed ones. Hopefully, future longitudinal research with larger sample size of Vietnamese firms encompassing these three years may confirm the empirical findings of the study. Secondly, it is impossible to access internal agreements among shareholders to score accurately corporate governance performance of every single firm because of the transparency and disclosure problems. Last but not least, the paper fails to prove the moderating effect of corporate governance in strengthening the association between firm performance and firm value in two years. It is recommended that further research should focus on exploring this moderating effect issue in a longer time to have wide insight.

According to the aforementioned research findings, several implications are suggested. Firstly, policymakers, particularly, Vietnam National Assembly, Ministry of Finance and State Securities Commission should constantly improve Vietnam regulatory framework as well as corporate governance guidelines and bring them closer to global good practices. Clearly, the advent of new policies in association with appropriate penalty for breaches is an efficient approach which requires poor corporate governance companies to absolutely comply notwithstanding posing an increased challenge. Thus, new regulations would create a power boost for Vietnam stock market to reach sustainable development.

Secondly, total market capitalization of Vietnam stock market is rather small compared to other countries in ASEAN region. This indicates that Vietnam has not attracted large and long-term cash flow of foreign investors. Therefore, listed firms should improve corporate governance performance to increase transparency in operations, business performance and expenses. As a result, it would help foreign investors understand target companies and make investment decision easily. Simultaneously, far from having corporate governance certificate for Board of directors, it is necessary to encourage all managers at different levels, including subsidiaries' managers, to take part in corporate governance training. Learning and

accumulating experiences from good corporate governance firms are an effective solution for poor corporate governance companies.

Lastly, investors may consider corporate governance status of listed firms as an essential factor in combination with other financial indicators and historical stock prices to achieve better valuation and reduce certain risk prior to making final decision.

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## **Appendix**

### *Corporate governance questionnaires*

#### *Sub-index 1: Disclosure*

- 1.** Does the company indicate in its charter, annual reports, or in any other manner, the penalties against the management in case of breach of its desired corporate governance practices?
- 2.** Does the company present reports of its audited financial statements on time?
- 3.** Does the company use international accounting standards?
- 4.** Does the company use any recognized auditing firm?
- 5.** Does the company disclose, in any form whatsoever, the compensation of the general manager and of the board of directors?

#### *Sub-index 2: Composition and Performance of the Board of Directors*

- 6.** Are the chairman of the board of directors and the general manager two different people?
- 7.** Does the company have monitoring committees, such as appointment or compensation or auditing committees, or all of these?
- 8.** Is the board of directors clearly comprised of external directors and possibly independent ones?
- 9.** Is the board of directors comprised of five to eleven members?
- 10.** Is there a permanent auditing committee?

#### *Sub-index 3: Ethics and conflicts of interest*

- 11.** Is the company free of any penalty or fine for breach of good corporate governance practices or of any rules of Vietnamese laws in the corresponding year?
- 12.** Taking into account the agreements among shareholders, are the controlling shareholders owners of less than 50% of the voting shares?
- 13.** Is the capital/voting rights ratio of controlling shareholders higher than 1?

#### *Sub-index 4: Shareholders' rights*

- 14.** Does the company charter or any other verifiable means facilitate the voting process of the shareholders beyond that established by law?
- 15.** Does the company charter guarantee additional voting rights to that established by law?
- 16.** Are there pyramidal structures that reduce concentration of control?
- 17.** Are there agreements among shareholders that reduce concentration of control?

# THE INFLUENCE OF PERSONALITY TRAITS AND INFORMATION ACQUISITION ON INVESTORS' TRADING FREQUENCY: EVIDENCE FROM THAILAND STOCK MARKET

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## Abstract

This study investigates the influence of investors' personality traits, information acquisition frequency, sources of information and information acquisition channels on investors' trading frequency. A survey questionnaire was administered among retail investors in the Stock Exchange of Thailand. Based on 455 valid responses, multiple regression showed that openness and neuroticism have negative influence while conscientiousness, extraversion together with information acquisition frequency have positive impact on investors' trading frequency. Sources of information and information acquisition channels did not have statistically significant influence on the investors' trading frequency, since our analysis of mean differences highlighted that there was no preference over sources of information and information acquisition channels among different group of investors in Thailand.

**Keywords:** *Investor trading behavior, Information acquisition, Source of information, Information acquisition channels, The Big Five Personality.*

## 1. Introduction

Nowadays, individual investors have become increasingly active in the financial markets, especially stock market. Stock Exchange of Thailand (2018a) reported that the number of individual investors who have opened the securities accounts has doubled in the past five years. Moreover, trading value of individual investors represented at 42.3% vs only 10.5% of the local institutional investors of the total market (Stock Exchange of Thailand, 2018b).

Such increase could be attributable to the introduction of internet trading since 2013, in addition to trading via brokers or financial institutions. Statistically, internet trading value has seen an increase to almost 0.7 Baht trillion in September 2018, with the continuously increase of opened internet trading accounts (Stock Exchange of Thailand, 2018a). Furthermore, with the digital era, a greater number of securities companies provide internet trading services compared to the past, since many investors have changed their trading behavior towards new convenient channels of online trading, as they obtained some benefit such as lower fees, more flexibility; and, able to monitor investment in real time (Campisi, 2017).

Apart from ease of access to stock trading, the internet has transformed access to company's information with greater speed and convenience, enabling greater participation in the stock market. To make decision related to the financial market, investors conduct research on technical and personal factors (Gill, Norris & Sutherland, 2001). On the one hand, many investors analyzed macro-economic factors, financial statements (Malik, Hussain & Ahmed, 2009) as well as firms' specific factors (Somoye, Rufus, & Ezekei, 2009). Additionally,

investors might give more weight to previous information of the company such as past stock price return (Kadiyala & Rau, 2002) or even financial performance and ratios such as profitability, return on equity, dividend policy, quality of management, return on investment, company's potential growth or price-to-earnings ratio (Malmendier & Shanthikumar, 2003; Ponnampereuma, 2013).

With more information channels, investors today have more information than ever before (Langlois & Shaw, 2017). In Thailand, Electronic Transactions Development Agency [ETDA] under Ministry of Digital Economy and Security Thailand (2017) reports that there is a greater number of people using internet to acquire and update information using various channels such as websites or blog, online newspaper and social media (Facebook, LINE and YouTube). Therefore, information acquisition is one of the key factors that could influence on investors' investment decision (Tauni, Fang, Rao, & Yousaf, 2015).

With ease of access and vast amount of available information, academicians have been keen to understand how exposure to information has an impact on financial decision of investors. Abreu and Mendes (2012) found that sources of information used by investors to acquire investment related information have a significant influence on investors' trading frequency. Investors tend to trade more frequently when they acquired information from reliable sources such as financial advice since they provide deep analysis on the stock market (Fischer & Gerhardt, 2007). Some investors making trade decision based on information acquired by themselves from other sources such as from public news, financial reports, and other specialized media (Tauni, Fang, & Iqbal, 2016), while some investors rely on information obtained from their friends and family, peers and colleagues, and other social interaction related to the stock market (Liang & Guo, 2015).

More recent studies investigate on how exposure to information impacts investors' psychological aspects. For instance, Tauni, Rao, Fang and Gao (2017) studied the influence of investors' personality traits on stock trading behavior along with sources of information investors chose to acquire among investors in China. They found that investors with openness, extraversion, neuroticism, and agreeableness personality trade more when they acquired information from financial advisors. Additionally, extraverted and agreeable investors tend to trade more when acquired financial information from word-of-mouth communication. Finally, investors with openness and conscientiousness personality adjusted their portfolio more frequent when they acquired information from specialized press such as financial reports and newspaper.

Motivated by greater access to publicly available information to retail investors, this study proposes to contribute to academic literature by extending the research model of information acquisition channels to develop greater understanding of the relationship among investors' personality, information acquisition and trading frequency.

## **2. Literature Review**

### *2.1 Trading Frequency*

Trading frequency refers to the number of trade transactions. Many academic literatures suggest that investors' decision making were influenced by several factors including macro-

economic factors, specific accounting factors of the organizations (Malik, Hussain, & Ahmed, 2009), firms' specific factor (Somoye, Rufus, & Ezekei, 2009), such as company's past stock price (Kadiyala & Rau, 2002), financial performance and ratios, source of information acquisition (Abreu & Mendes, 2012), along with personal factors such as demographic background, their investment goals and objective (Malmendier & Shanthikumar, 2003; Ponnampereuma, 2013; Pavani & Anirudh, 2010).

## *2.2 Information Acquisition Frequency*

According to previous literatures, information acquisition frequency is positively correlated with the investors' trading behavior (Abreu & Mendes, 2012; Barlevy & Veronesi, 1999; Grossman & Stiglitz, 1980; Guiso & Jappelli, 2006; Holthausen & Verrecchia, 1990; Karpoo, 1986). Peress (2004) explained that since investors incurred high costs on information acquisition, they expected greater returns from their investment. Thus, the investors tend to adjust their portfolios more frequently in pursuit of high returns (Tauni, Rao, Fang, Mirza, Memom, & Jebran, 2017).

## *2.3 Source of information*

Many previous literatures found that source of information has a significant impact on investors' trading frequency. They proposed three main sources of information related to stock investment namely financial advice from professional, specialized press and word-of-mouth (Tauni, Fang, & Iqbal, 2016; Tauni, Rao, Fang, & Gao, 2017).

Firstly, Abreu and Mendes (2012) argued that the quality of information had an influence on investor's trading frequency, particularly when they obtained reliable and credible analysis of the stock market and financial advices from professionals. Secondly, Epstein and Schneider (2008) also revealed that news from trustworthy sources such as specialized press led to more portfolio balancing or higher trading frequency. Thirdly, Word-of-mouth (WOM) is typically convenient sources of information from friends and family, colleagues, and other social interaction (Liang & Guo, 2015), despite being the least effective. Tauni, Fang and Iqbal (2017) found that there was a negative correlation between WOM and trading frequency. Similarly, Epstein and Schneider (2008) suggested that news acquired from WOM was less trustworthy. As a result, investors were less likely to adjust their portfolio based on information from WOM.

## *2.4 Information Acquisition Channels*

Investors today have more information than ever before due to more information channels (Langlois & Shaw, 2017). In 2018, Thais spend almost ten hours using internet in average per day (ETDA, 2018). Electronic Transactions Development Agency (2017) reported that the top 5 popular activities via internet during the past 5 years of Thai users were sending and receiving email, reading online books, watching and listening to music, searching information and using social media, respectively. Overall, Thais likes to use YouTube, Facebook and Line, respectively (ETDA, 2017). As online channels have become important avenues, this study proposes to explore whether different information acquisition channels have any influence on investors' trading frequency.

## 2.5 Personality Traits

Several academic works suggested that investors could not accurately assess their investment ability because of behavioral biases, which could trigger over or under trading (Odean, 1998; Gervais & Odean, 2001; Daniel, Hirshleifer, & Subrahmanyam, 1998). In this regard, personality traits have been found to exert influence on investors' trading behaviors (McCrae, 1992). One of the most common used tools is the "Big Five Personality Traits" framework (Barrick & Mount, 1991), consisting of Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism.

### *a) Openness*

Openness represents the differences in intellectual curiosity, aesthetic sensitivity, and imagination. The individuals with high openness are more likely to be creative, imaginative, sensitive, attentive to inner feelings, and tend to investigate everything eagerly (Costa & McCrae, 1992; John & Srivastava, 1999). Individuals with low level of openness tend to have a narrow range of intellectual and creative interests (Soto, 2018). Previous research found a negative relationship between openness and trading frequency, arguing that open-minded individual tended to trade less because of doubtfulness (Tauni et al., 2015) and the need to investigate before acceptance (Brookfield, 1987; Kasperson, 1978; Palmer, 1991).

### *b) Conscientiousness*

Conscientiousness represents being organized, productiveness, and responsible. Individual with high conscientiousness tends to be organized, plan ahead, mindful of details and deadlines (Cherry, 2018), whereas less conscientious individuals disorganize and have less motivation to complete tasks (Soto, 2018). Conscientious investors tended to work hard to complete their trade transaction to achieve the best results from their investment (Costa & McCrae, 1992; Epstein & Schneider, 2008). Consequently, they were more likely to trade more frequently, following additional information acquired to achieve the desired results (Durand, Newby, Peggs, & Siekierka, 2013).

### *c) Extraversion*

Extraversion represents the individual differences in excitability, sociability, talkativeness, assertiveness, activeness and highly emotional expressiveness (Costa & McCrae, 1992; John & Srivastava, 1999). Extraverted individuals, actively involve and interact with others around them (Heinström, 2010), while introverted individuals tend to be more reserved and prefer solitude (Soto, 2018; Cherry, 2018). Extraverted investors prefer to build warm relationships with others and acquire bulk of information from their network; and, make decision based on those acquired information (Costa & McCrae, 1992). Tauni, Fang and Iqbal (2017) found that extraverted investors tended to trade more frequently, since their trading activities enable them to connect with other people (Barber & Odean, 2001; Pompian & Longo, 2004). Nevertheless, conflicting evidence was reported by Durand, Newby, Tant, and Trepongkaruna (2013) who found negative relationship between extraversion and trading frequency, arguing that extraverted individuals tended to have higher bid-ask spread and were less willing to trade.

#### *d) Agreeableness*

Agreeableness represents compassion, respectfulness, and acceptance of others (McCrae & Costa, 2008). Individuals who are high in agreeableness tend to be more cooperative, avoid conflicts with others (Costa & McCrae, 1992); and, hold generally positive beliefs about others (Soto, 2018). Those with low agreeableness tend to be more competitive with the less regard for others or even sometimes manipulate others to get what they want (Cherry, 2018). Investors with agreeableness tend to believe in information acquired from their peers and follow the trend in the market. Durand et al. (2008) found that agreeableness has a negative association with the intensity of trading. However, some other research reported that agreeable investors, characterized by agreeableness tended to trade more if they acquired information from others (Tauni et al., 2015).

#### *e) Neuroticism*

Neuroticism refers to negative emotions such anxiety, moodiness, depression, sadness, pessimism, anger and fear (Costa & McCrae, 1992). Individuals with high neuroticism tend to experience mood swings, anxiety, irritability and sadness. Those with less neuroticism tend to be more stable, calm and resilient even in difficult circumstances (Cherry, 2018; Soto, 2018). Neurotic investors tend to seek information more frequently to make sure that they know every important aspects of the situation. They believe that the more they know, the less unpleasant surprises they will face (Nichols-Hoppe & Beach, 1990; Krohne, De Bruin, El-giamal, & Schmukle, 2000). Academic evidence on neuroticism and trading frequency is mixed. While Durand et al. (2008) found a positive relationship between negative emotion of neuroticism traits and investors' trading frequency, Tauni, Rao, Fang, Mirza, Memom, and Jebran (2017) found that anxiety and nervousness a make fewer trade.

### **3. Research Framework and Methodology**

#### *3.1 Conceptual Framework*

The conceptual framework of this study (Figure 1) is developed from the theoretical model of Tauni, Fang and Iqbal (2017). Based on the literature review, this study examined four hypotheses, as shown in Table 1.

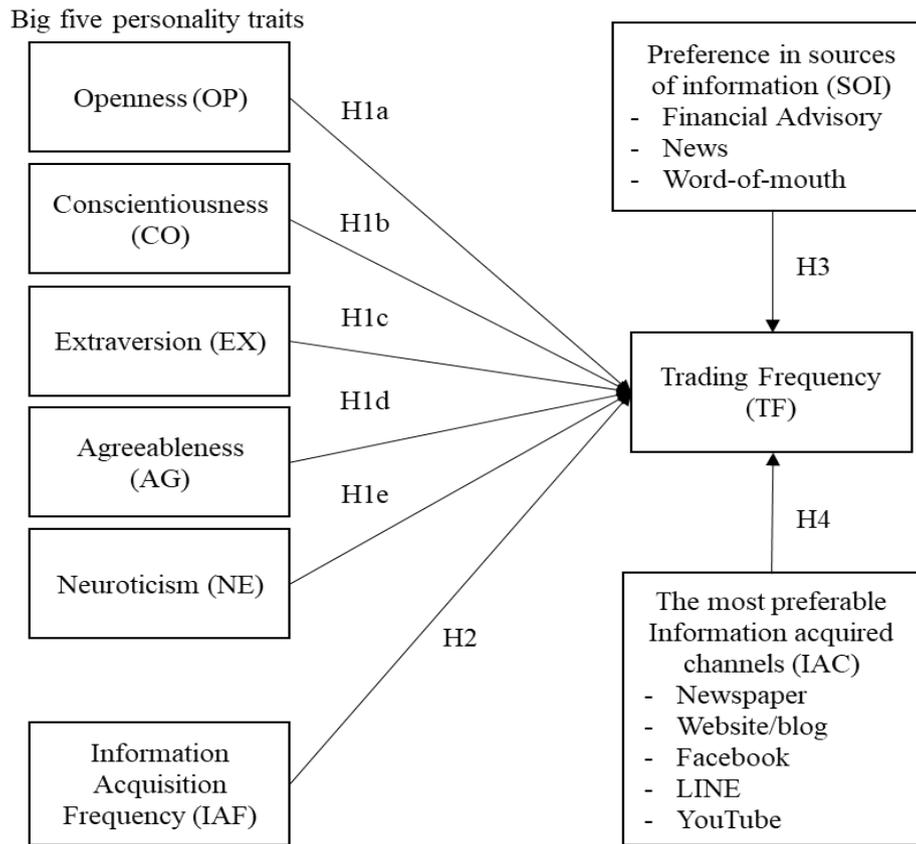


Figure 1: Conceptual Framework

Table 1: Research Hypotheses

No.	H	Hypotheses
1	H1	Openness (OP), conscientiousness (CO), extraversion (EX), agreeableness (AG) and neuroticism (NE) personality have significant influence on trading frequency (TF).
2	H2	Information acquisition frequency (IAF) has significant influence on trading frequency (TF).
3	H3	There is a significant mean difference among preference in source of information (SOI) toward trading frequency (TF).
4	H4	There is a significant mean difference among the most preferable information acquisition channel (IAC) toward trading frequency (TF).

### 3.2 Research Methodology

This research applied quantitative approach with non-probability sampling method collecting data from online questionnaire for analysis. The respondents are selected by convenience and snowball technique by randomly sending online questionnaires through the researcher's

contact and asking respondents to forward research questionnaire to their friends, family or colleagues. Additionally, quota sampling technique was also applied with an intention to find out a mean difference among investors' preference in sources of information and the most preferable information acquisition channel towards their trading frequency.

The research questionnaire is divided into 3 parts - screening questions, demographic and main part of study questions. The Five-Point Likert scale is used to examine the hypotheses by ranking from strongly disagree (1) to strongly agree (5). Also, research papers and journals are used as secondary data to support this research.

The statistical methods that are applied include Simple Linear Regression (SLR) and Multiple Linear Regression (MLR) to analyze the significant influence of the independent variables towards dependent variable, while One-Way ANOVA is used to determine the significant mean differences among each group towards dependent variable.

### 3.3 Population and Sample

Theoretically, at least 384 respondents are required to represent 1.6 million Thai retail investors with 95% confident level (Krejcie & Morgan, 1970). The target respondents are the individuals who have ever invested in stock market and live in Thailand at least 6 months. The 526 respondents participated in the survey from various demographic profile. After validating sample by using two screening questions, there are 455 respondents being qualified as sampling research.

### 3.4 Reliability Test

The reliability test is performed by using Cronbach's alpha coefficient with 30 sets of pilot questionnaires. All the test results of independent variable standard were more than 0.6 (Cronbach, 1951) as follow;

Table 2: Reliability Test

Variables	Cronbach's Alpha	Number of items
<b>Openness</b>	0.655	5
<b>Conscientiousness</b>	0.730	5
<b>Extraversion</b>	0.806	4
<b>Agreeableness</b>	0.658	4
<b>Neuroticism</b>	0.819	5

## 4. Result and Discussion

### 4.1 Demographic Profile Summary

This part examines the characteristics of demographic factors arising from the data of 455 respondents who lives in Thailand at least 6 months continuously and invest in the stock market. The demographic profile is summarized and exhibited in Table 3 below.

Table 3: Demographic profile

Demographic	Characteristics (N=455)	Frequency	Percentage (%)
Gender	Male	243	53.4
	Female	212	46.6
Age	Less than 20 years old	4	0.9
	20-29 years old	178	39.1
	30-39 years old	92	20.2
	40-49 years old	78	17.1
	50-59 years old	68	15.0
	60 years old and above	35	7.7
Marital Status	Single	295	64.8
	Married	160	35.2
Education	Less than Bachelor Degree	17	3.8
	Bachelor Degree	224	49.2
	Master Degree or above	214	47.0

Occupation	Student	10	2.2
	Office Worker	276	60.7

Demographic	Characteristics (N=455)	Frequency	Percentage (%)
	Business Owner	93	20.4
	Civil Servant	8	1.8
	Unemployed	25	5.4
	Others	43	9.5
Workplace	Bangkok	379	83.3
	Others	76	16.7
Monthly Income	Below 20,000 THB	30	6.6
	20,001-45,000 THB	139	30.6
	45,001-70,000 THB	123	27.0
	70,001-100,000 THB	54	11.9
	100,001-150,000 THB	52	11.4
	More than 150,000 THB	57	12.5
Trading Experience	Less than 2 years	60	13.2
	2-5 years	179	39.3
	5-8 years	80	17.6
	8-10 years	49	10.8
	Above 10 years	87	19.1

Risk level	1 (Risk averse)	8	1.8
	2	28	6.1
	3	115	25.3

Demographic	Characteristics (N=455)	Frequency	Percentage (%)
	4	183	40.2
	5 (Risk lover)	121	26.6
Financial Knowledge	1 (Very low)	8	1.8
	2 (Low)	42	9.2
	3 (Neutral)	219	48.1
	4 (High)	141	31.0
	5 (Very high)	45	9.9

Overall, the respondents are 53.4% male and 46.4% female. In terms of age, the majority of the respondents are 20-29 years old at 39.1% followed by less than 20 years old (0.9%), 30-39 years old (20.2%), 40-49 years old (17.1%), 50-59 years old (15.0%) and 60 years old or above (7.7%). Over 64.8% are single. With respect to education background, 49.2% of the respondents hold Bachelor degree, followed by Master degree of higher (47.0%). More than 60.7% are office worker followed by business owner (20.4%) and most of their workplace is in Bangkok (83.8%). The majority monthly income ranges are 20,001-45,000 THB (30.6%), followed by 45,001-70,000 THB (27.0%). For trading experiences, majority of respondents have trading experience of 2-5 years (39.3%), followed by above 10 years of experience (19.1%), 5-8 years (17.6%), less than 2 years (13.2%) and 8-10 years of experience (10.8%).

With a quota sampling technique, the group size of respondents with unique preference on each source of information is proportionate among the five sources of information acquisition channels in this study.

#### 4.2 Descriptive Analysis

##### 4.2.1 Pearson's Correlation

Table 4: Pearson's Correlation Matrix

Descriptive Statistics (N=455)			Pearson Correlations						
Variable	Mean	SD	TF	IAF	OP	CO	EX	AG	NE
<b>TF</b>	2.63	1.39	1						

<b>IAF</b>	3.89	1.33	<b>0.641*</b>	1					
<b>OP</b>	3.46	0.93	-0.327*	-0.167*	1				
<b>CO</b>	3.36	1.02	0.334*	0.302*	-0.107*	1			
<b>EX</b>	3.46	0.89	0.378*	0.299*	0.024	0.189*	1		
<b>AG</b>	3.42	0.95	-0.147*	-0.130*	0.242*	-0.081*	0.050	1	
<b>NE</b>	3.09	1.08	-0.279*	-0.186*	0.234*	-0.162*	-0.040	0.073	1

Note: \* represents the correlation which is significant at the 0.05 level (1-tailed).

Based on Pearson's Correlation Matrix, most variables are correlated with one another at the 95% confident level with P-value less than 0.05. There is a strong positive relationship between information acquisition frequency and investors' trading frequency with the correlation of 0.641.

#### 4.3 Inferential Analysis and Multicollinearity Validation

Table 5: Result of MLR for H1a-H1e with Trading Frequency as dependent variable

Variables	Standard Coefficient ( $\beta$ )	VIF	Result
<b>OP</b>	-0.256*	1.123	Supported
<b>CO</b>	0.210*	1.075	Supported
<b>EX</b>	0.341*	1.043	Supported
<b>AG</b>	-0.073	1.069	Not Supported
<b>NE</b>	-0.166*	1.080	Supported
<b>R Square</b>		0.340	
<b>Adjusted R Square</b>		0.332	

Note: \* represents the correlation which is significant at the 0.05 level (1-tailed).

Multiple regression shows that all five independent variables exhibit statistically significant relationship towards trading frequency at 95% confidence level. The P-value of four independent variables, openness, conscientiousness, extraversion and neuroticism are less than 0.05 indicated that H1a, H1b, H1c and H1e are supported whereas H1d is not supported. All personality traits, except agreeableness, have statistically significant impact on trading frequency. While openness and neuroticism exert negative influence on trading frequency, conscientiousness and extraversion have shown positive influence. Among all four personality traits, extraversion has the highest magnitude towards trading frequency with standard coefficient of 0.341. Moreover, the variance inflation factor analysis confirms that there is no multicollinearity problem, with all variance inflation factor less than 5.0.

Table 6: Result of SLR for H2 with Trading Frequency as dependent variable

Variables	Standard Coefficient ( $\beta$ )	VIF	Result
<b>IAF</b>	0.641*	1.000	Supported
<b>R Square</b>	0.411		
<b>Adjusted R Square</b>	0.409		

Note: \* represents the correlation which is significant at the 0.05 level (1-tailed).

Table 6 shows that information acquisition frequency could explain trading frequency at 95% significance level with R2 of 41.1%. Furthermore, there exists a positive relationship between information acquisition frequency and trading frequency with the standard coefficient of 0.641, suggesting that investors traded more frequently in accordance with the frequency of acquisition of information.

Table 7: Result of One-Way ANOVA for H3

ANOVA					
SOI	Sum of Squares	Df	Mean Square	F	Sig.
<b>Between Groups</b>	0.743	2	0.372	0.191	0.826
<b>Within Groups</b>	879.740	452	1.946		

<b>Total</b>	880.484	454			
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One-Way ANOVA shows that there is no significant mean difference in each preferred source of information (SOI) toward trading frequency (TF) as P-value is more than 0.05. Therefore, the hypothesis is not supported  $F(2, 452) = 0.191, p = 0.826$ . This finding suggests that publicly available information whether they might be advices from professional, specialized news or WOM do not have any impact on investors' trading frequency.

Table 8: Result of One-Way ANOVA for H4

<b>ANOVA</b>					
<b>IAC</b>	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	15.434	4	3.858	2.007	.092
Within Groups	865.050	450	1.922		
Total	880.484	454			

One-Way ANOVA shows that there is no significant mean difference in each preferred information acquisition channel (IAC) toward trading frequency (TF) as P-value is more than 0.05. Therefore, the hypothesis is not supported  $F(4, 450) = 2.007, p = 0.092$ , suggesting that the investors are indifferent when it comes to information acquisition channel.

## **5. Conclusion, Limitation, and Recommendations**

### *5.1 Discussion and Conclusion*

To explore the influence of personality traits, information acquisition frequency, information acquisition channel and sources of information on investors' trading frequency, this paper extends the academic work of Tauni, Fang and Iqbal (2017), to obtain insights among retail investors in Thailand. The findings on personality traits are partly consistent with previous works. Results from the study shows that there is a positive influence of conscientiousness (H1b) on investors' trading frequency. This is consistent with the Durand, Newby, Peggs and Siekierka (2013), who conducted the research in Australia and found that investors traded more to achieve their desired investment return. Similarly, extraversion (H1c) is positively related to trading frequency. Several researchers (Barber & Odean, 2001; Pompian & Longo, 2004) found that extraverted investors tend to trade more frequently since their trading activities enable them to connect with others.

On the other hand, openness (H1a) has negative influence on investors' trading frequency. This is consistent with previous researches that openness investors are often curious which

they usually investigate for other alternatives prior to decision making, leading to less trade because of their doubtfulness (Brookfield, 1987; Tauni et al., 2015); in contrast with Kleine, Wagner and Weller (2015), who found that openness can lead to excess trading. Lastly, neuroticism (H1e) also has negative impact on investors' trading behavior. This is in line with Tauni, Rao, Fang, Mirza, Memom, & Jebran, (2017), who indicated that investors tend to reduce the number of trade due to their anxiety and nervousness, while it is inconsistent with Durand et al. (2008).

Apart from the influence of personality traits, results from H2 suggests that information acquisition frequency has a strong positive relationship and significant influence on investors' trading frequency. This is consistent with many previous literatures that the more investors acquired information, the more they trade (Abreu & Mendes, 2012; Barlevy & Veronesi, 1999; Grossman & Stiglitz, 1980; Guiso & Jappelli, 2006; Peress, 2004).

With respect to investors' preference among sources of information and information acquisition channels towards investors' trading frequency, this finding suggests that the investors are indifferent among sources or channels of information acquisition.

Based on the results of this study, certain personality traits exert influence on investors' trading frequency, along with information acquisition frequency. This research offers academic contribution to support understanding of investors' trading frequency by examining the psychological factors. With respect to information acquisition frequency, sources and channels, the study attempts to understand whether dynamism of massive information flow has any impact on investors' trading behavior.

### *5.2 Implication and Recommendation*

In the past, financial services industry has provided financial advices to their clients based on simple criteria such as gender, risk aversion and other demographic profiles. Nowadays, with intense competition in the industry, marketers, financial advisors and policy makers are forced to differentiate themselves from their competitors. They could consider on profiling personality traits to know their clients, provide better services; and, offer differentiated investment programs.

From the results of this study, even though there are no significant mean difference among preferred sources of information and any channels, the investors consume information in various sources and channels regardless nowadays. However, the result has been confirmed that the more investor acquired information, the more they trade. Thus, investors are still being influenced by information. Therefore, it is recommended for securities firms to continue focusing to utilize these channels to provide investment information with advisory to enhance investors' experiences. Moreover, information providers should optimize these channels with reliable, credible information; and, maintain advisory services to serve their subscribers.

### *5.3 Limitation and Future Research Directions*

This research focuses on big five personality traits, information acquisition frequency, sources and channels of information impacting on the individual investor's trading behavior

separately. Further research can examine whether the investors who differ in their personality types may vary in their trading behavior by the usage of different sources of information or information acquired channels. In addition, by adding more factors or variables related to the investors' investment decision such as risk level, financial knowledge, trading experience or other demographic factors into the model could enhance more understanding on investors' behavior.

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# APPLYING CONSUMER NEUROSCIENCE TO SUSTAINABLE BEHAVIOR STUDIES

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## Abstract

This article explores potential applications of consumer neuroscience to the research on sustainable behavior of consumers. This topic has been studied extensively during the past five decades. However, practitioners cannot apply the results from these studies with certainty, since the current knowledge may or may not be able to predict actual green behavior. Response bias associated with the use of self-reported techniques can account for this dilemma. Neuro-imaging techniques can alleviate this problem and offer additional insights into the brain processes that occur while consumers evaluate and make decision on green behavior. To provide directions on how to apply the consumer neuroscience to green consumer research, this article presents a comprehensive framework of factors affecting green behavior based mainly on the findings from studies that have utilized self-report methods. The contribution of the existing studies that have employed neuro-imaging techniques and future research directions in applying the consumer neuroscience to this field of study are discussed.

**Keywords:** *Green Behavior, Sustainability, Consumer Neuroscience, Marketing.*

## 1. Introduction

Environmental degradation has been an urgent global threat. Based on Global Risks Perception Survey in 2018, business respondents from different sectors, including government agencies, non-governmental organizations, and experts, report that environmental deterioration is a more important threat facing humanity than are economic risks (World Economic Forum, 2018). Environmental degradation leads to undesirable consequences globally. For instance, human emission of carbon dioxide brings about global warming and subsequently causes climate changes. Global warming increases temperatures of the oceans and the earth's surface and thus accelerates ice melting, which increases sea level, flash floods, and influx of natural disasters. These adverse events attract the public attention around the world and inspire consumer movement to protect the environment. In 2015, Nielsen polled 30,000 consumers in 60 countries (Nielsen, 2015). A large number of consumers in all age groups were willing to pay extra for sustainable brands manufactured by companies known for their social value. More recent polls echo the same sentiment. A poll in 2018 indicated that Australian consumers are ready to pay more for products and brands of companies that minimize their negative effect on the environment (Sustainability Matters, 2018). Likewise, more than half of UK consumers and one third of US consumers are in favor of taxing all food products in plastic packaging while a large number of them plan to support supermarkets selling fruit and vegetables without plastic packaging (Eagle, 2018).

Since this trend in environmental protection has continued for several decades, academic studies on the behaviors of environmentally concerned consumers have a long history. This area of study has received attention since 1970s, when academic research started to consider factors related to consumers' environmental concerns (Kumar & Polonsky, 2017). Based on Ebsco Discovery Service search engine (EDS), 13,279 articles on green consumers were published in academic journals during 1970-2018 period. With this massive intellectual

interest, the literature on green consumer behavior has identified many factors influencing consumers' inclination to protect the environment, especially in terms of green purchase intention (e.g., Groening, Sarkis, & Zhu, 2018; Herbes, Friege, Baldo, & Mueller, 2015). Whether green attitude will lead to green behavior intention and consequently to actual ecological conservation behavior is still inconclusive. On the one hand, several studies have found that positive attitude toward the environment influence the intention to purchase green products (e.g., Maichum, Surakiat, & Peng, 2016; Wee, Ariff, Zakuan, & Tajudin, 2014). On the other hand, others have found a moderate relationship or even poor association between green attitude and intended green behavior (e.g., Joshi & Rahman, 2015; Wright & Kljn, 1998). Furthermore, purchase intention may not lead to actual purchase behavior (Groening, Sarkis, & Zhu, 2018; Soonthonsmai, 2000). The discrepancy between consumer's intention to buy green products and their actual purchase behavior is the major concern for practitioners, since they cannot rely on the causal relationships reported in the academic studies to form their strategy effectively. Various explanations are provided for these discrepancies, including the inherited weakness of studies relying on self-report techniques (Vezich, Gunter, & Lieberman, 2017).

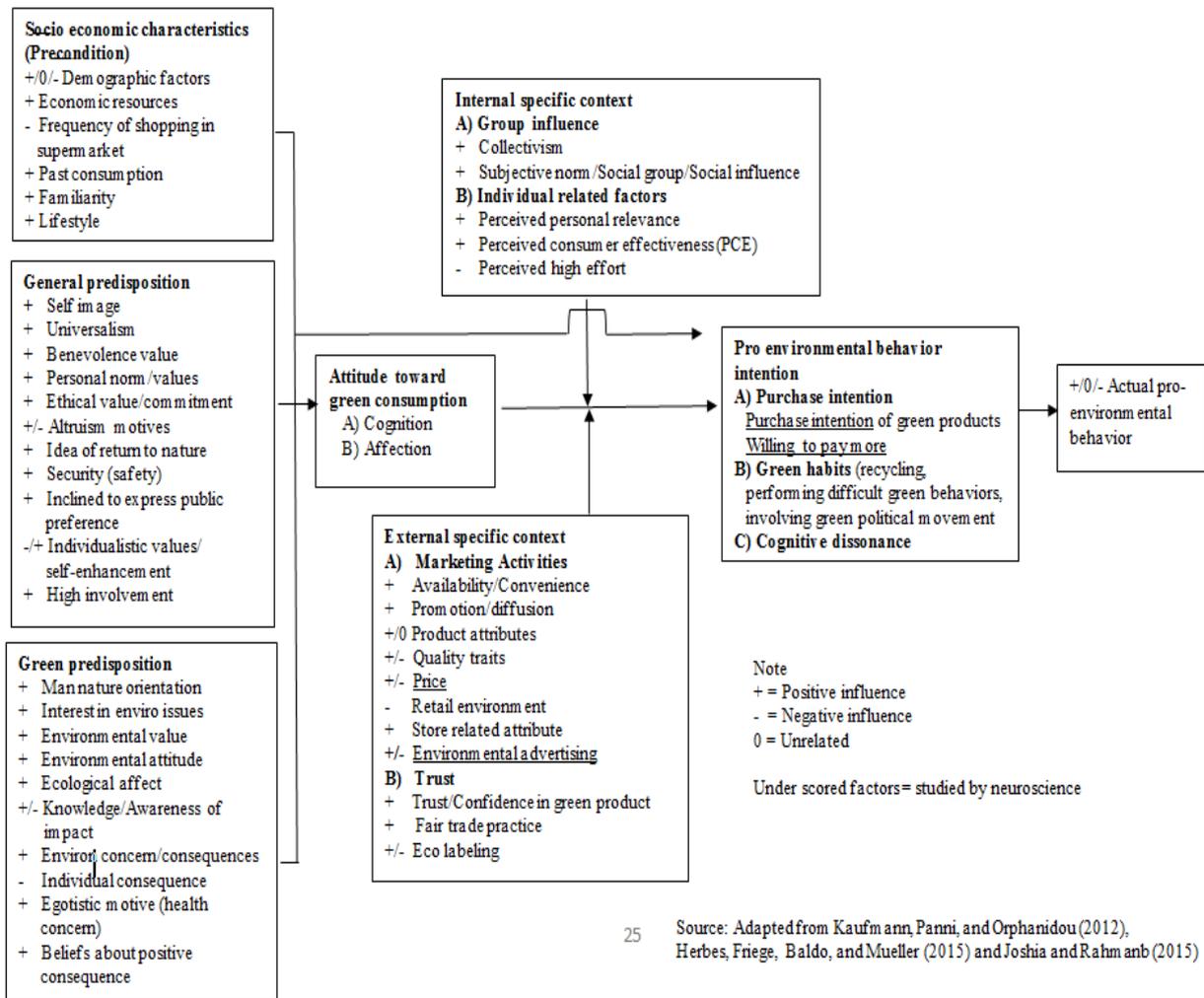
As the application of consumer neuroscience has a potential to deepen our understanding of consumer behavior in various areas of marketing (e.g., Pozharliev, Verbeke, & Bagozzi, 2017; Plassmann, Venkatraman, Huettle, & Yoon, 2015; Solnais, Andreu-Perez, Sánchez-Fernández, & Andréu-Abela, 2013), brain imagining techniques could be a crucial tool in extending and assessing the validity of our existing knowledge. Thus, this paper intends to investigate the potential contribution of neuroscience to better understanding of green consumer behavior. With this objective, the paper starts with an overview of academic literature on green consumers in order to identify the state-of-the-art knowledge of this phenomenon. Next, empirical studies on green consumer, which have applied neuro-imaging methods, are described. Comparison between the current body of knowledge and the studies employing consumer neuroscience can further contribute to neuro-imaging methods. The final section covers conclusion and recommendations.

## **2. Overview model**

Green behavior is operationalized as behavior that minimizes any harm to the environment or benefits the environment (Steg & Vlek, 2009). In this paper, several terms are used interchangeably to represent green behavior, including pro-environmental behavior, conservation behavior, environmental concern or sustainable actions, or other similar terms.

In Figure 1, an integrative framework based on various literature reviews (e.g., Groening, Sarkis, & Zhu, 2018; Herbes, Friege, Baldo, & Mueller, 2015; Joshi & Rahman, 2015) presents diverse factors affecting green behavior. At the center of the model, positive green attitude leads to consumer intention to conserve the environment. This attitude is influenced by consumers' socio-economic profile, green attitude propensity, and general attitude propensity. Attitude towards green consumption can be expressed at the cognitive level, i.e., the attitude based on the belief in the existence of environment threats, or at the affective level, i.e., the attitude based on emotional reaction to the threat. Additional factors pertaining to internal and external specific contexts also play an important role in strengthening or weakening the relationship between green attitude and green behavior intention.

Figure 1: Integrated Framework of Factors Affecting Consumer Green Behavior



25 Source: Adapted from Kaufmann, Panni, and Orphanidou (2012), Herbes, Frieger, Baldo, and Mueller (2015) and Joshua and Rahmamb (2015)

## 2.1 Green behavior

### 2.1.1 Green purchase intention

Green purchase intentions reflect numerous behavioral tendencies, including planning to buy green products, switching to green-oriented brands, replacing a non-green version with a green option of a brand, intending to pay more for green benefit, and considering green attributes as the most important attributes when making buying decision (Chen & Chang, 2012). When facing a tradeoff between physical performance and environmental benefits, green consumers should emphasize more environmental conservation dimension than other functional aspects. Likewise, while the general public is unwilling to purchase high-priced green products, green-conscious consumers are inclined to dig deeper into their pockets to purchase these products (Ginsberg & Bloom, 2004; Narula & Desore, 2016).

### 2.1.2 Green habits

While green buying behavior is limited to the purchase of pro-environmental products or services, eco-friendly activists deliberately choose to perform activities aimed at preservation of environment (Apaydin & Szczepaniak, 2017), such as reducing waste and reusing products (Berndt & Gikonyo, 2012; Barr & Gilg, 2007). In addition, they may become members of an

environmental group (Edwards & Oskamp, 1992) or participate in political actions (Stern, Dietz, Kalof, & Guagnano, 1995) to influence public policy or company decisions. These behaviors are interrelated with purchase of green products. For example, recycling behavior can predict the behavior of purchasing green products (Bohlen, 1993). Green activists are more likely to be willing to pay more for green products or services and to support higher taxes to finance environment protection programs (Apaydin & Szczepaniak, 2017).

### *2.1.3 Cognitive dissonance*

Cognitive dissonance occurs when consumers face two equally attractive choices but have to choose only one (McDonald, Oates, Thyne, Timmis, & Carlile, 2015). If this cognitive dissonance cannot be dissolved, green attitude does not translate to actual ecological conserving behavior. For instance, although flying causes more carbon footprint than any other transportation mode, many green consumers still select to fly (McDonald, Oates, Thyne, Timmis, & Carlile, 2015). Even though they feel the conflict, they reduce the importance of conserving the environment and put more emphasis on other non-green factors, such as the benefit from family reunion.

## *2.2 Characteristics of green consumers*

### *2.2.1 Socio-economic characteristics*

Demographic characteristics, including gender, age, income, education, and occupation, are likely to be associated with pro-environmental consumers (Apaydin & Szczepaniak, 2017; Kaufmann, Panni, & Orphanidou, 2012). Green conscious consumers tend to be female, younger, more educated, and have a higher level of income (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003). However, the influence of age and income on green behavior is still disputable. While these factors are widely used to segment ecologically concerned consumers, a negative relationship between demographic factors and environmental concern behavior has been found in several studies (e.g., Fisher, Bashyal, & Bachman, 2012; Roberts, 1996). Others have shown that demographics are of limited value in the segmentation process (e.g., Zhao, Gao, Wu, Wang, & Zhu, 2014; Stern, Dietz, Kalof, & Guagnano, 1995). In addition to demographic profiles, other consumer characteristics affect green behavior. For instance, more frequent shoppers in supermarkets are less likely to care for organic food products (Tanner & Wölfling, 2003). The longer people have been engaged in green purchase, the more likely they will become involved in several conserving activities (Welsch & Kühling, 2009).

### *2.2.2 Global predisposition*

Consumers may process motives, attitudes, values, or beliefs that are broader than ecology conservation but can support their tendency to act as environmentally conserving consumers. Most of the factors in this category are found to positively relate to green behavior intention. For instance, green consumers who are concerned about the welfare and interests of others (universalism attitude) (Krystallis, Vassallo, Chrysohoidis, & Perrea, 2008), who yearn to return to nature (Cerjak, Mesić, Kopic, Kovačić, & Markovina, 2010), and who are highly involved buyers, i.e., those who actively participate in the purchase process (Agrawal & Rahman, 2015), are more likely to have favorable attitudes toward green behavior. However, individualistic value or self-enhancement have been found to both positively and negatively affect green behavior intention. Consumers with a strong self-preservation and competitive nature are unlikely to act ecologically (Borden & Francis, 1978) due to their emphasis on

individual rather than social attitudes (Follows & Jobber, 2000). Nevertheless, self-oriented concerns, or concerns about the respect from their peers, inner self-respect (Bénabou & Tirole, 2006), variety seeking, and self-indulgence (Lobo & Chen, 2012), can motivate individualistic consumers to act pro-socially.

### *2.2.3 Green-related predisposition*

Similar to global predisposition, green-related predisposition includes numerous dimensions that affect green attitude and behavioral intention positively. For instance, environmental concern refers to an intense attitude towards sustaining the environment (Crosby, Gill, & Taylor, 1981), as consumers are aware of environmental problems and attempt to alleviate them (Dunlap & Jones, 2002). Nevertheless, it is unclear whether environmental knowledge and awareness of its effect influence green attitudes (Zsóka, 2008).

## *2.3 Internal specific context*

Whether attitude towards green purchase actually leads to purchase intention depends on another set of moderating variables that affect consumers' responses to ecological problems. These internal moderators reflect group references and individual-related factors.

### *2.3.1 Group influence*

Collectivism-individualism cultural dimension defines the extent to which an individual evaluates the needs of his/her peers and his/her own needs while making decisions (Hofstede, 2001). Collectivistic-oriented consumers tend to engage in recycling because they work and assist others cooperatively, since they place greater emphasis on group achievement rather than personal gains. Therefore, collectivism has been found to affect consumers' green buying behavior (Kaufmann, Panni, & Orphanidou, 2012; Kim & Choi, 2005) and attitudes towards recycling and recycling behavior (McCarty & Shrum, 2001). However, in the study of Lee (2017), collectivism did not influence the purchase intention directly or indirectly through other factors that affect green purchase intention. Subjective norm has a stronger influence on green purchase compared to collectivism. It concerns the feeling of social pressure on an individual's decision to perform or not perform a particular behavior based on the expectation of relevant peers, such as family members, friends, and inner circles. Subject norms have been found to have a positive effect on the likelihood of consumers to become concerned about ecology (Chen & Deng, 2016; Mansor, Yahaya, Nizam, & Oshino, 2014).

### *2.3.2 Individual-related factors*

Another set of influential factors is related to consumers' perception that a specific environmental issue is directly relevant to them and that their efforts lead to a positive outcome. While there are many environmental issues, consumers' action on a specific issue depends on the degree of their perceived personal relevance to an issue or perceived importance of an issue (Kang, Liu, & Sangjin, 2013). Likewise, individuals with a strong perceived consumer effectiveness (PCE) who believe that their individual actions will make a difference are more likely to be ecologically responsible compared to those who have lower PCE (Apaydin & Szczepaniak, 2017). PCE, or the attitude toward the ability to protect the environment, contains two dimensions consumption and non-consumption actions (Rice, Wongtada, & Leelakulthanit, 1996). Both are related positively to green behavior.

## *2.4 External specific context*

### *2.4.1 Marketing activities*

Whether consumers with strong environmental consciousness will patronize green products depends on both specific situations and product-related attributes. Typical consumers prefer easily accessible products, so they do not spend time searching for eco-friendly products (Young, Hwang, McDonald, & Oates, 2009) and avoid other behaviors that are perceived to require too much effort (Gossling et al., 2005). Marketing activities to protect the environment can encourage consumers to engage in more responsible behavior (Tsarenko, Ferraro, Sands, & McLeod, 2013) and can discourage them from doing so. For example, green consumers avoid buying green products that lack detailed information that would support their decision to buy green products (Matthes & Wonneberger, 2014). Using emotional advertising strategies will not gain the confidence of green consumers since they prefer direct, accurate, and detailed information. The prevalence of misleading green claims can make consumers easily suspicious of green ads (Vermeir & Verbeke, 2006).

### *2.4.2 Trust*

Trust in product owners is a crucial factor in convincing the consumers to respond to green appeals. However, exploitative business practices, such as misleading advertising, deceptive packaging, and unfair pricing, can inhibit consumers' willingness to buy green products (Kaufmann, Panni, & Orphanidou, 2012). Consumers are skeptic about environmental marketing appeals because they do not believe in unsubstantiated or exaggerated claims (Kaufmann, Panni, & Orphanidou, 2012). For instance, terms such as 'eco-friendly', 'recyclable' and 'organic' are often claimed without supporting evidence (Davis, 1992). These unproven claims cause consumers to be skeptical about green appeals. This greenwashing effect could be overcome by the endorsement of reputable certification schemes to provide consumers with trustworthy information (Testa, Iraldo, Vaccari, & Ferrari, 2015).

## *2.5 Intention and actual behavior*

The causal relationship between intention to engage in green behavior and actual ecological conservation is uncertain for various reasons. Individuals could act as free riders, hoping to reap the benefits of better environment without sacrificing their personal comfort or paying additional costs (Herbes, Friege, Baldo, & Mueller, 2015). Additionally, when choosing between a green product and a conventional product option, the quality of green choices is too low to meet consumers' expectations (Young, Hwang, McDonald, & Oates, 2009). An environmentally friendly product is generally perceived as too costly and lower on performance compared to conventional products (Lee et al., 2014). Furthermore, consumers are not always able to predict their future buying behavior because of a number of unpredictable changes in the environment (Loewenstein & Schkade, 1999). Economic downturn could cause shoppers to be more price sensitive than usual. Negatively published reports on certain green products could trigger consumers to avoid similar products.

The research methodology employed can also account for contradictory findings. Self-report techniques, such as survey, personal interviews, or telephone interviews, that have been used to measure green consumer attitudes and behaviors, have some inherent limitations and biases (Pozharliev, Verbeke, & Bagozzi, 2017). Particularly, self-report techniques are often criticized for leading to response biases (Micu & Plummer, 2010), since non-green

respondents attempt to appear as environmentally concerned consumers to be more acceptable socially or to avoid reacting negatively towards company’s green marketing even though they are suspicious about the company’s claims (Vezich, Gunter, & Lieberman, 2017).

### 3. Neuroscience

In search for more accurate information, neuroscience techniques have been employed to investigate the propensity of consumer green behavior. Although various neuroscience tools have been used in academic research, only electroencephalogram (EEG) and functional magnetic resonance imaging (fMRI) have been used in green consumer studies. These brain imaging techniques attempt to gauge various properties of the electrical impulses moving around the brain (Zurawicki, 2010). The electrical impulse starts at the neurons or nerve cells, which are the main units of the nervous system. Once, they receive the input from the sensory system, such as taste, smell, and vision, these cells start firing electrical signals among networks of neurons and send motor commands to the muscles. The communication between the two cells occurs at their synapses, creating electric nerve impulses and releasing specific chemicals (i.e., neurotransmitters), which in turn evoke electrical activity (i.e., electromagnetic) in the next cell. This electrical activity among a large number of neurons gives rise to phenomena of the mind that are measured using the neuroscience tools. Based on this process, EEG records the electrical activity while fMRI measures the oxygen level from the blood flow into an active neural region.

Only six studies found in EDS database have employed neuroscience tools to investigate ecology behavior. These studies are summarized in Figure 2. Even though the adoption of neuroscience in this area is still in the early stage, the existing studies have brought new insights into green consumer behavior, as described in the following sections.

Author/Authors	Subjects	Neuro Method	Dependent Variable	Independent variable
Lee, et al., 2014	Students in Korea (both genders)	EEG	Green purchase intention	Green product message
Herber et al., 2015	German residents	EEG	Willing to pay more for green electricity	Green product message and price
Lee, 2016	Students in Korea (both genders)	EEG	Willing to pay for pro-social products	Emotional empathy traits, CSR message
Vezich and Lieberman, 2017	Female	fMRI	Self-reported responses versus neural activity	Green ads
Wang, 2018	Female	EEG	Low carbon consumption	Video emotion stimulation, emotion self-rating scale
Casado-Aranda, Martínez-Fiestas, & Sanchez-Fernaandez, 2018	Both genders	fMRI	Neural responses and attitudes toward advertisements	Persuasive ecological audio messages pronounced by young or old voices classified by past and future frame

Figure 2: Neuroscience methods used in ecological studies

#### 3.1 Bias in response

Neuro imaging technique can detect social desirability bias. Vezich, Gunter, and Lieberman (2017) investigated social desirability bias by comparing self-reported responses with

objective data from subjects' brain activity. After viewing green and non-green ads, participants rated their liking and perceived sustainability of these ads. The finding showed that they rated green ads more favorably compared to non-green ads. However, the fMRI data suggested otherwise, i.e., when observing the neuron activity, brain regions related to personal valued and rewards showed higher activation to non-green ads than they did to green ads. This finding supports the contention that social desirability bias is likely to occur in self-report studies.

### *3.2 Willingness to pay*

Two studies tested green consumers' willingness to pay for premium price. The study of Lee et al. (2014) found that green consumers tend to pay less attention to pricing. In this study, participants were initially classified into two groups based on their product choice. Green consumers are defined as those who choose an environment-friendly product option while non-green consumers select a conventional product. While viewing a green product message, theta waves in the frontal brain area were activated more in green consumers' EEG than in non-green consumers, indicating that green consumers' brains were more cognitively engaged with green products than were non-green consumers. While processing the price information, the frontal theta waves did not differ significantly between green consumers and non-green consumers. The frontal theta activations of green consumers while watching the green message were higher when viewing low price cues. Thus, Lee et al. (2014) concluded that green consumers paid more attention to the environmental message rather than to the low price.

In the study of Herbes, Friege, Baldo, and Mueller (2015), German subjects were tested in terms of their willingness to pay premium price for two types of renewable energy, specifically "mixed green" and "solar only" energy products. Six price points were compared to each participant's monthly electricity bills to test their willingness to spend on the two energy products. After participants saw a specific price level, the cue word "cheap" or "expensive" appeared on the computer screen randomly. After viewing each price point and a cue word, they selected the yes or no button to indicate their agreement or disagreement with the presented cue word. Their reactions to these two energy types were gauged by their responses to open-ended questionnaires and brain scans. Their findings showed that self-reported willingness to pay was significantly lower compared to objectively measured willingness using EEG brain scan. Hence, this seems to suggest that participants might be more willing to pay more than what they actually claimed.

### *3.3 Green appeals*

Pro-social messages seem to bring out affective empathetic emotions in green consumers. In the study of Lee (2016), participants were presented with fictional advertisements of the fair-trade coffee option as a social product and the conventional coffee option as a non-social product. Those who chose the fair trade coffee option were classified as green consumers while those who selected the conventional coffee option were non-green consumers. The neuron activity at the anterior cingulate cortex region associated with empathy was observed during participants' responses to pro-social messages. For green consumers, their EEG analysis showed significantly higher theta activations for the fair trade coffee than for the conventional production option. Moreover, the brain wave for pro-social messages was lower for the non-green group than for the green group. Lee (2016) concluded that green consumers are more sensitive to pro-social messages.

The presentation method of green message also influenced consumer preference. The study of Cardoso and Schoor (2017) examined the brain's response and behavior of consumers to persuasive environmental messages. Manipulation of time (past versus future) and the age of the voice (young versus old) were used to test participants' reaction to the message. Using fMRI, they found that subjects prefer future-reference messages described by young voices. In other words, past-framed messages described by old voices were less attractive to green consumers. The study of Wang (2018) suggested that positive content video material is also superior to negative one in encouraging green consumption. This study employed EEG to explore the influence of positive and negative emotion on low-carbon consumption behavior. Subjects were more likely to choose low-carbon consumption under positive emotion condition than under negative emotion condition.

#### **4. Research direction**

Even though the application of neuroimaging tools to study green behavior is still infancy, these tools are promising in enhancing our understanding and predicting more precisely green consumers' behavior. Consumer neuroscience can validate, refine, or extend the current knowledge of sustainable behavior by providing insights into the underlying brain mechanism (Plassmann, Venkatraman, Huettle, & Yoon, 2015).

##### *4.1 Validation*

The existing studies that have employed neuroscience methods have covered only few areas, which are purchase intention, willingness to pay premium for green products or services, and the nature of ecological message (see unscored factors in Figure 1). Other factors affect green attitude and behavior intention, making it very complex for practitioners to create a successful green marketing strategy, since they have to incorporate many factors. In addition to detecting social desirability, neuro imaging techniques can be employed to validate the influence of as well as test the relative importance of these factors on purchase intention, as illustrated in Figure 1. If all of these factors evoked a similar pattern of neural activation, practitioners' task would be simplified in that they could choose any of these factors to create green marketing strategy. Additionally, factors that would be superior in eliciting a certain desirable neural process should be considered when designing the strategy.

Furthermore, the influence of several factors on green attitude and behavior, as shown in Figure, 1 is inconclusive. For instance, eco-labelling and quality trait were found to influence purchase intention both positively and negatively (Joshi & Rahman, 2015). Likewise, the effect of socio economic characteristics of consumers, such as gender, age, and education, on consumers' sustainable behavior is still in question (Herbes, Friege, Baldo, & Mueller, 2015). Neuro imaging tools could be used to scrutinize the directional influence of these factors. A typical experimental design in the neuroscience study employs more than one condition, such as positive versus negative messages or mixed green versus solar energy, to test different brain activation patterns. This method can be used to investigate the influence of a factor in a specific context. Consequently, the inconsistency can be tested if contradictory results are due to different conditions.

##### *4.2 Brain mechanisms*

Although various areas of the brain interact and collaborate with each other to interpret incoming stimuli and generated behaviors, anatomical localization corresponding to certain brain regions while engaging in a specific task allows researchers to focus on a particular

region of the brain. The ability of neuro imaging tools to observe the neural process of brain experiences facilitates the study of mental processes, which cannot be studied using the current data collection technique that relies mainly on self-report methods. Here, neuroimaging techniques can be applied to investigate various mental activities of green consumer, including decision-making process, reward processing, approach and withdrawal motivation, emotional processing, and attention and memory (Solnais, Andreu-Perez, Sánchez-Fernández, & Andréu-Abela, 2013). Figure 3 shows some potential research areas on how to employ neuroimaging to investigate a specific brain location relevant to a certain aspect of consumer green behavior. For instance, a study on how consumers evaluate different alternatives of green options under conditions of risk and ambiguity could observe the ventromedial prefrontal cortex (VMPFC), since this brain region plays a crucial role in the process of decision-making (Hiser & Koenigs, 2018). The VMPFC is an inter-connected neural network located at the bottom of the frontal lobe and collaborates with amygdala in processing reward and decision-making.

Brain mechanism	Brain areas (functions)	Research on brain mechanism
Attention and memory	Occipital lobe (Processing of visual stimulus)	Consumer attention to green messages
	Hippocampus (Formation and consolidation of long-term)	Influence of brand loyalty on the choice of green alternative
Emotional processing	Amygdala (Processing of positive and negative emotion)	Trust or confidence in green products, fair trade practice and eco-labeling
Approach and withdrawal motivation	Ventrolateral prefrontal cortex: VLPFC (Representation of the threat of punishment for noncompliance with social norms)	Threat of disapproval for non-compliance with norms relevant to green behavior of social groups
	Dorsolateral prefrontal cortex: DLPFC (Cognitive control over emotion, including over impulse towards social norm compliance)	Decisions in the context of moral green dilemmas when green benefit is inferior to non-green attributes
Decision-making	Anterior cingulate (Integration of emotional and motivational information in the decision-making process)	Decision making process with a strong sense of empathy and social interaction
	Ventromedial Prefrontal Cortex: VMPFC (Processing of different alternatives and their perceived value)	Reward- and value-based decision making
Reward processing	Striatum (Evaluation of actual rewards with respect to expectations)	Prediction of the outcome of green decision
	Insula (Activation of pain, love, emotion, craving, addiction, and enjoyment)	Emotional consequence from engaging green behavior

Figure 3: Potential Research Areas on Brain Processing on Green Issues

Source Adapted from Solnais, Andreu-Perez, Sánchez-Fernández, and Andréu-Abela (2013)

### 4.3 Implicit process

Two thought systems of the neural process are conscious and unconscious (Wokke, Gaal, Scholte, Ridderinkhof, & Lamme, 2011). Conscious thought refers to mental processes of which a person is aware in terms of perception, thoughts, feelings, and emotion while unconscious mind is capable of performing mental process automatically outside of one's awareness (Gao, Zhang, Wang, & Ba, 2012). Consumers' decision processes often include unconscious processes of which consumers are unaware (Davidson, 2004). Neuroscience techniques can also provide useful information about these implicit or unconscious processes that are generally difficult to access by other research approaches. Studies on implicit processes address similar topics as studies on explicit processes described above, since subliminal messages could affect various mental processes, from paying attention to a specific stimulus to selecting a specific option (Wongtada, 2017). However, when studying unconscious behavior, the research technique and brain locations have to be adjusted

accordingly. For instance, to send the information to unconscious thought, a brief stimulus of less than 50 milli second, which conscious mind cannot detect, is presented to participants as the incoming cue, followed by a masking procedure. Additionally, the brain regions associated with unconscious and conscious processes may be different. For example, when presenting an affective stimulus with and without awareness, insular cortex is activated in the awareness condition while posterior cingulate cortex is activated in the unawareness condition (Brooks & Stein, 2014).

## 5. Conclusion and Recommendation

Even though the academic investigation of environmental conservation behavior has progressed to provide a comprehensive framework explaining this behavior, its predictive validity still needs to be evaluated. That is, the pro-environmental intention does not always lead to actual behavior, as seen from the contradictory findings. The research in consumer neuroscience field provides a promising venue to better understand this phenomena. However, neuroscience does not aim to replace but to enhance the conventional data collection technique. Neuroimaging technique has several limitations, as any other technique. For instance, consumer neuroscience studies are often conducted within an environment that does not resemble natural shopping scenarios; thus, consumers' experiences are not based on real life situations. Some neuroscientific research methods, particularly fMRI, have to be implemented exclusively in a laboratory where participants have to lie down inside a tub while the experimentation and brain scanning are conducted (Świerczyńska-Kaczor, 2015). Additionally, a typical study in laboratory-based setting employing EEG uses a small sample size of less than 50 subjects (Wongtada, 2017) and includes only specific groups (Lee et al., 2014). That is, each participant is checked for basic physiological condition to exclude those who are sleep deprived, have too much caffeine, are left-handed, or have abnormal vision, since these conditions will bias the result of the brain scan. These limit the generalizability of the findings from consumer neuroscience to the real-life situation and the general population. Nevertheless, consumer neuroscience should still be an integral part of scientific search in this field, since it could help alleviate some weaknesses of conventional research method.

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# NEUROMARKETING IN NEUROSCIENCE: THE CASE OF EYE-TRACKING TECHNOLOGY (ET)

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## 1. Introduction

In recent years, researchers have increasingly used a multidisciplinary approach in their scientific development, which has led to new insights and discoveries (Javor, Koller, & Lee, 2013). The use of neuroscientific methods has gained prominence in various marketing applications and has contributed to greater understanding of human behavior. According to Martinez (2011), neuromarketing (NM) is the result of the integration of three different disciplines:

- Neurology: focuses on the study of the human brain; Cognitive psychology: studies the relationship between mind and human behavior;
- Marketing: the discipline responsible for developing new, profitable products and services to meet the needs of consumers.

NM focuses on researching and understanding consumer behavior through studies of the Central and Peripheral Nervous System. NM researchers measure people's responses to marketing stimuli. The development of this field depends on the progress of several fields of study: neuroscience, applied physics, and computer science (Bercea, 2013).

According to Calvert and Brammer (2012), NM is the application of cognitive neuroscientific tools in marketing in order to measure the unconscious responses of consumers. NM is being integrated more and more into traditional market research, incorporating information derived from traditional, explicit tools with new ideas to reveal how consumers really feel.

Therefore, NM is being used to study consumer behavior and purchase decision processes (Glimcher, Camerer, Fehr, & Poldrack, 2009) to better understand the effect that psychological phenomena and emotions have on purchasing decisions and to provide a more comprehensive service in assessing the effectiveness of marketing phenomena, such as advertising, the competition over consumer attention, and the insertion of products (Reimann et al., 2011). NM is a tool that is potentially useful for the development of more effective strategies and action plans for brands, and corresponding business plans (Martinez, 2011).

## 2. Objective of the Research

This research attempts to review the usage of eye-tracking technology (ET) in neuromarketing using secondary data, academic articles from several journals and electronic databases. Eye-tracking technology is one tool that is used widely in the study of neuroscience and neuromarketing. ET is used for the analysis of visual attention and from the perspective of neuromarketing, it seeks to associate visual attention with the cognitive and emotional responses of consumers.

### 3. Eye-tracking Technology (ET)

ET measures what the user is looking for (the gaze point on the screen), the eye movement in relation to the head, and pupil dilation (Zurawicki, 2010). The different ET systems are able to estimate an eye's point of attachment on a computer screen, or on the shelf of a supermarket, and may determine precisely where the user's attention is directed (Duchowski, 2003). To Hoffman and Subramaniam (1995), eye movements can be seen as an objective indicator of where a person's overt attention is focused and help to filter visual information.

There are several brain regions related to vision (approximately 25% of the brain). The processing of visual attention begins when eyes receive light signals. This information leaves the eyes and travels to the brain through specialized neurons called photoreceptors that convert light signals into encoded electrochemical signals (Zurawicki, 2010). According to Russo (1978), eye movements can be considered good behavioral candidates for measuring visual attention and information acquisition because they are closely related to higher-order cognitive processes. Therefore, understanding and monitoring pupil dilation and other patterns in eye movement is an important part of neuroscience for neuromarketing.

The following Table 1 shows what can be tracked using ET.

Table 1: Variables usually measured by eye-tracking (Tobii, 2013)

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What can be tracked?

Gaze direction and gaze point: Gaze interaction with computers and other interfaces in behavioral research. Tests the human response to better understand what attracts people's attention.

Detection of eye presence: Finding the eyes is the first thing the eye-tracking system does and is therefore a key part of eye-tracking.

Eye position: The ability to calculate the eye position in real time is part of what makes the ET system accurate and precise with regard to visual attention, including studies of advertising campaigns on television, internet, and cinemas, with no delays in the processing of this information.

Eye identification: Eye tracking identifies individual ocular characteristics based on geometric calibration. The geometrical characteristics of the eye and iris identification can also be used for user identification.

Eyelid closure: Eyelid closure is used to monitor the attention or sleepiness of people.

Pupil Dilation and sizes: These are reliable measures of emotions and are used in market research.

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### 4. Case Studies using ET

Chae and Lee (2013) investigated the impact of using celebrities as human brands on the quality of consumer decisions in an environment of online purchases through the analysis of visual attention using ET. They concluded that using human brands could improve a

consumer's decision-making process and improve the quality of their decisions by encouraging intuitive choices and reducing cognitive, emotional effort. They found that the fixation duration on the human brand image (regarded as visual attention in this research) is relatively longer during this high-quality decision. The fixation duration on the human brand image can also increase trust in products and encourage consumers to think positively about the quality of decisions they make (both long eye fixation and high product trust result from high decision quality). Another study on human brands showed that the level of consumer appeal for images of known individuals in online shopping has a significant influence on visual attention and purchase intent for consumers in relation to a product (Chae & Lee, 2013).

The convergence of other attention behaviors, such as selecting channels with a TV remote control during advertisements, and attention to the brand, also represent a great potential for ET. Teixeira, Wedel and Pieters (2012) studied the impact of branding activities through the audio-visual representation of brands. They also analyzed the focus, attention dispersion, and evasion of consumers during TV advertisements. Using eye-tracking data in association with records of the TV remote control, they analyzed 2,000 participants and 31 TV advertisements. Among their findings, the experiment revealed that keeping full and constant brand exposure significantly decrease deviation.

Another study with TV advertisements using ET evaluated the effectiveness of brand presentation when subjects were allowed to fast-forward through advertisements with a remote control until their program resumed. The study concluded that the viewer's attention is strongly limited to the center of the screen when fast-forwarding. ET can help us to understand the new challenges created with technological changes and their effects on consumers' attention (Brasel & Gips, 2008). Anticipating this behavior, advertisements transmitted during fast-forwarding can still bring static images, which would allow advertisers to communicate part of the desired information, like the brand logo, for instance.

A study of women selecting ladies' handbags demonstrated the motivation to observe specific parts of the product and identified a clear order of priorities and fixations on different parts of the product. Based on the statistical analysis of fixations, the author came to the following conclusion: the handbag body was the part that first attracted the attention of participants and the handle was the part that received most attention, generating a stronger visual attraction (Ho, 2014). This line of research provides evidence that eye tracking can be applied to future empirical research into the visual behavior of consumers.

ET has been used in determining behavior patterns in reading habits and helped advertisers to format more attractive pricing packages. One research project examined numeric digits and eye movements in order to identify patterns in selective visual attention related to the rounding of prices. The project investigated whether individuals are conscious or not of left-right orientation (front/rear) when reading numeric digits. It was concluded that the use of specific combinations of digits might result in the perception that a price is higher or lower than its actual value (Coulter, 2007).

Some studies have used ET to investigate the role of various stimuli on the shelves (Chandon, Hutchinson, Bradlow, & Young, 2009). The ET technology assesses exactly what consumers see and what they miss when they are looking at different categories (Grewal et al., 2011). ET studies may provide insights into which elements are the most important and effective in attracting attention and enhancing sales (Grewal et al., 2011).

One particular study tested the relationship between the colors used on websites and the trust and satisfaction engendered in customers. The study found cultural effects moderating this relationship between color and customer loyalty. Online satisfaction and trust proved to be strong predictors of online loyalty with respect to colors. Color choices significantly influenced online trust and satisfaction. Differences were found among subjects that came from several different countries: Japan, Germany and Canada. The study demonstrated that the impact of the variation in color schemes supports the idea that color has the potential to influence the perceptions, emotions, reactions and behavioral intentions of users (Cyr, Head, & Larios, 2010).

In another study, researchers analyzed the impact of contrasting colors in the fruit and vegetable market on the attention behavior of customers. They used ET to determine the perceived quality, visual appeal, and purchase intent of customers. Results were measured using a Likert scale. Six different types of product packaging were photographed with four treatments of different colors: the same original color of products, variations of complementary packaging colors, complementary-analogous colors and analogous colors. It was concluded that products using packaging with colors that were the same or similar to the fruits and vegetables within the packaging were perceived as higher quality, more visually appealing, and more likely to produce purchase intent than those products with complementary treatments or complementary-analogous treatments (Bix, Seo, & Sundar, 2013). Therefore, ET helps to increase the perceived value of products through a better understanding of consumer perceptions.

ET was also used to evaluate the effectiveness of marketing emails on people from different demographics, and from various market sectors, in order to identify techniques that could be applied to improve engagement and performance. One study examined 50 emails in eight different categories, including fashion, holidays, daily sales, and Christmas gifts. The researchers discovered the benefits of elaborating on the structure of marketing emails using digital signaling, consumer clicks, key contents, a combination of text and pictures, digital sales techniques, graphic elements, decreased spacing between elements, and the importance of peripheral vision, all of which influence the direction of eye movement (Rowe & Burrige, 2012).

Another related study examined the attention of consumers on internet banners to determine the effectiveness of these banners. The results suggest that animation in banners does not necessarily increase the user's attention but even if the user does not consciously notice a banner, his attitude toward the brand is influenced (Lee & Ahn, 2012). An additional study examined the effect of stimuli on consumers' attention to print ads. The results showed that the focus of the reader's visual attention can be efficiently directed by using certain techniques (Hutton & Nolte, 2011).

One study investigated the visual attention of adolescents (aged 14-19) on the health warnings displayed on cigarette packages. Some of the adolescents had never smoked, some were experimenters, some were weekly smokers and others smoked daily. It was concluded that adolescents who never smoked paid attention to health warnings in different types of packaging, a behavior that may be related to their decision not to smoke. The behavior of smokers was quite different (Maynard, Munafò, & Leonards, 2013). A better understanding of the visual attention of smokers and non-smokers can aid in the effectiveness of specific campaigns for these groups of adolescents.

Another social problem being studied is the irresponsible consumption of alcoholic beverages. A study conducted using adolescents investigated whether they pay attention to messages about responsibility and moderation that appear in magazine advertisements for alcoholic beverages. The study evaluated the association between attention and the subjects' ability to accurately recall the content of these messages. In general, the messages were rarely viewed. Beverage bottles, product logos, and graphics were the elements most often seen in the ads. One of the conclusions of the study was that messages about responsibility and moderation failed to capture the attention of adolescents who participated in the study and that further typographical modification would be needed to make the messages more effective (Thomsen & Fulton, 2007).

## **5. Using ET in Studying Food Labels and Packaging**

One of the areas that have continuously attracted researchers with ET is the area of food labels and its packaging. In 2013, Fiszman et al. reported that although researchers work to innovate when developing new packaging formats, trying to create new multisensory experiences in packaging, many of the new designs are only visually perceptible. Their research was aiming to determine how the packaging elements for a particular brand of jam attracted attention and the immediate message the packaging conveyed. They concluded that certain package elements could be used to drive the attention of the consumer. For example, the researchers found that the picture on the packaging label and the bottle shape influenced consumers' willingness to try the product. Their research used ET and a qualitative research method known as word association.

In the same year, another study investigated the visual attention behavior in nutrition information of food labels. With the use of ET, it was possible to identify consumers with two different kinds of characteristics: analytical-rational thinking and intuitive-empirical thinking. Consumers who predominantly used analytical-rational thinking searched for more information and performed a more careful analysis of nutritional information to inform their choices than those consumers who predominantly used intuitive-empirical thinking. These findings have potential implications for the design of communication strategies aimed at changing diet patterns, because it was found that consumers' attention was mainly determined by top-down factors; analytical-rational consumers tend to look for specific information on the labels (Ares et al., 2013).

An additional study investigated how consumers acquire information from food labels through eye tracking. The participants of the study performed two tasks in which they evaluated the perception of how healthy the products appeared to be and their willingness to buy them by observing three unknown labels of three different products (mayonnaise, bread and yogurt). As they assessed the labels, participants' eye movements were recorded by means of ET. The results showed the following: in order to assess their willingness to purchase unknown food labels, consumers turn their attention to selected areas in search of specific information such as brand, ingredients, nutritional information, and the pictures on the labels, regardless of the type of product and label design (Ares, Mawad, Giménez, & Maiche, 2013).

Subsequently, in another study by Ježovičová, Turčínková & Drexler (2016) on the influence of package attributes on consumer perception at the market with healthy food, ET is also used. The paper provides findings about how packaging of healthy foods is perceived by consumers. The primary data were collected by eye-tracking using the SMI RED 250. This

investigation analyzed 12 healthy products and it was completed by 50 respondents. This method was supplemented with in-depth interviews with the same respondents who participated in the eye-tracking research. A questionnaire survey (n = 261) was also a part of the research. Based on these two methods, real and declared consumer behavior can be recognized and the differences between these behaviors can be identified. The main interest was to determine which package attributes of healthy foods are the most interesting according to consumers. The research shows that the most attention in terms of information is devoted to nutritional value, food composition and also country of origin. Furthermore, the attention was focused on the most suitable packaging materials for various kinds of products as well as colors used on the packaging of these foods. The results provide valuable information to create an attractive and effective packaging of healthy products.

Research results based on in-depth interviews, questionnaire survey and eye-tracking can be divided into separate product categories. Altogether 12 food products that can be included in the category of healthy products were examined. For example, category of beverages includes examined samples of fruit juices and milk. For each there were two products examined in order to compare selected attributes on the packaging.

For fruit juices a mango juice packaged in Tetra Pak and a black currant juice in a PET bottle has been used. In eye-tracking research, the dwell time (i.e. the amount of time respondent's eyes spent in the same area) analysis, it was found that respondents paid more attention to the percentage of fruit juice content (100 %) than the volume of juice (0.33l). However, in terms of frequencies (hit rate) it can be concluded that attention of 42 respondents out of 54 was drawn to the indication of juice package volume and 38 respondents looked at the fruit content. As part of in-depth interviews, it was detected that respondents remembered those elements of the packaging. However, more than a third of respondents answered that the juice contained 33 % of fruit. It can be seen that some of them notice certain information provided on packaging, but not everything is processed well enough and individual pieces of information may end up mixed. Therefore, it seems that if producers would want to ensure the correct perception of fruit juice content, no other numerical input (such as volume) should be anywhere close to it, rather it should be the only number on the front of the packaging. The packaging size (volume) may be placed on the back side, so the confusion misleading customers to the detriment of the manufacturer would be reduced.

In terms of packaging materials used for fruit juices Tetra Pak it is preferred. Respondents consider it of higher quality, more reliable and the packaging design goes better with healthy foods in their opinions. These preferences were also examined in the questionnaire survey and the results can be equated with the results of in-depth interviews. On the contrary, for fruit juices in PET bottles many respondents have the feeling that it rather is a sweetened mineral water, which they don't consider as a healthy food product. In terms of the colors used respondents think it is good to use colors that are associated with fruits from which the juice is produced, or use a picture of particular fruits on the packaging. When examining mango juice orange color was perceived positively. Within the eye-tracking research it can be concluded that up to 53 respondents (out of 54) paid attention to the information about contents (ingredients) of examined juice. However, in terms of dwell time they spent only 477.6 ms on average looking at the list of ingredients of mango juice, which compared to the packaging of black currant juice is by 34.9 % less. This reduced interest could perhaps be due to the language used. While mango juice contents description was in German, for black currant juice it was in Czech. Based on this characteristic, it can be argued that for a Czech consumer, it is important that the information is provided in their mother tongue would lead

to increased attention. Results also show that less respondents were interested in examining the nutritional value than the juice ingredients. It was only 45 respondents who examined it, however, the dwell time was 5.4 times longer than that of the what they spent on examining contents.

In the category of beverages, milk was also included. Again, one product was packed in PET bottles and the other one in Tetra Pak. For these products opposite results as fruit juice were discovered. Respondents favored PET bottles both in the questionnaire survey and in-depth interviews. Easy handling with the product was mentioned as the most favored feature. Respondents mentioned the ease of re-opening and closing of the products and how practical for storage in a refrigerator it was. In terms of freshness of milk respondents also have this quality more associated with PET bottles than Tetra Paks. The results of the eye-tracking research, by analyzing the dwell time, indicate that the most sought out and important information on the packaging of milk is the fat content. This information, however, had a different location on analyzed products. Greater attention was paid to this figure in the lower left corner (for milk in Tetra Pak) than to this information when it was placed mid- upper part of the milk packaging in PET bottles. This result can be partly explained by the information provided in in-depth interviews, when respondents explained that for milk in PET bottles they have more trouble locating this information.

Based on these results it can be stated that the information on the fat content of milk for consumers is very important and they need to find it easily. In this case it was on the bottom of the container; perhaps respondents are more accustomed to find it there. What colors and packaging design used concerns, respondents positively assessed pictures of mountains on the packaging which, as they mentioned, evoked in them a feeling of freshness. In-depth interviews also revealed that similar feelings is evoked by use of blue color which they would preferred to use of green as it was on examined milk packaged in PET bottles. Both milk products were in organic quality, therefore, it was possible to observe which one of them will gain a higher rate of interest. Milk in Tetra Pak had both European and Slovak organic labeling. 38 respondents out of 54 noticed the European label, the Slovak label attracted attention of only 24 respondents. When analyzing how much attention was paid to the product contents and nutritional values results were very similar as for the fruit juices. The information about milk contents was examined by 51 respondents with an average dwell time of 864.6 ms, while 44 respondents were interested in the nutritional value with an average dwell time of 5174.1 ms, which is almost 6 times more.

For analysis of products in the category of biscuits, it can be summarized that based on the dwell time analysis the greatest interest was focused on following three elements characterizing the product features: “no milk” (303.4 ms), “GMO free” (257.9 ms) and “gluten free” (255.6 ms). The logos certifying the organic origin “EU bio” and “CZ bio” received about the same level of attention. the largest number of respondents focused on information about nutritional value of biscuits, and also the dwell time results confirm it. One package of the analyzed biscuits was packed in transparent packaging material, which was viewed positively by the respondents. The other analyzed sample was biscuits packed in opaque packaging. There was only a picture of the biscuits on the front side, but the packaging didn’t allow respondents see the actual content. The results of in-depth interviews as well as from the questionnaire are almost identical. 96 % of respondents in our questionnaire survey would prefer purchasing biscuits in a transparent packaging, as they can clearly imagine the taste, and it also gives them better idea of what they are getting already in

the purchase decision-making process. The biscuits in non-transparent packaging were also considered less attractive.

The last selected products surveyed were 2 packages of couscous, a side dish that can also be classified as a healthy food. The examined packages of these products were quite similar, so the focus was mostly on learning what information on a package are noticed and whether any information is considered as missing. Therefore, the area of interest focused mainly on the back of the packaging containing product information. One of the analyzed products included even cooking instructions, but in the context of in-depth interviews it was found that respondents do not usually seek this information on a packaging at the moment of their purchase decisions-making, but rather, it at home it would be something they would be looking for on the packaging. A closer examination of the eye-tracking research results allows seeing that perception of women and men is slightly different. Increased interest in the cooking instructions area has been reported for women. In contrast, men are seen slightly more interested in numeric values that are associated with nutritional value.

## 6. Conclusion

This paper has shown the potential of Eye-tracking for neuromarketing research and for the development of marketing in general. The use of Eye-tracking and Neuromarketing in marketing analysis is becoming increasingly popular and shows great potential for aiding market research, innovation, product development, advertising, sales, customer service, loyalty programs, and various other marketing topics.

Eye-tracking in market research can provide insights into participants' habits even when these participants are not aware that they are being observed. This information is mainly related to what should attract visual attention or visual behavior in different situations. Other qualitative techniques can also be used in combination with eye-tracking to provide more information about the cognitive and affective responses of consumers.

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# BRANDS AS HUMANS: A SYSTEMATIC REVIEW OF BRAND PERSONALITY SCALES

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## **Abstract**

The brand personality research in marketing and consumer behavior can be characterized as inconsistent, incoherent, and highly disorganized. Most of the research in the literature has focused on developing, replicating, and extending the brand personality scale in different contexts and settings. This paper systematically investigates brand personality concept and research in the literature over decades. The results show that the brand personality scales differ considerably in terms of their conceptualizations and dimensions as well as vary widely across countries and cultures in a variety of product and service categories.

**Keywords:** *Brand Personality Scale; A Systematic Review.*

## **1. Introduction**

In the last several decades, there has been a growing interest in the concept of brand personality for both academic researchers and marketing practitioners (Aaker, 1996; Aaker, 1997; Azoulay & Kapferer, 2003; Keller, 1993; Khandai, Agrawal, & Gulla, 2015; Levy, 1959; Martineau, 1958; Milas & Mlačić, 2007; Plummer, 1985). As products are increasingly indistinguishable (Kim, Han, & Park, 2001; Rutter, Chalvatzis, Roper, & Lettice, 2018), a well-established brand personality allows firms to gain a sustainable competitive advantage by providing a means to differentiate a brand in a product category (Aaker 1996; Chu & Sung, 2011; Crask & Laskey, 1990; Kim et al., 2001).

Brand personality is a concept to humanize a brand. It is suggested that people tend to anthropomorphize objects to facilitate their interactions with the material world (Brown, 1991; Fournier, 1998; Plummer, 2000). When consumers identify and characterize brands as humans, they are able to bond and connect better with the brand and thus tend to favor the brand more (Khan & Ahmed, 2018). This is because the anthropomorphizing of brands in general aids consumer emotional engagement, which in turn can help developing and establishing a stronger relationship between consumers and brands (Caprara, Barbaranelli, & Guido, 2001; Chaplin & Roedder, 2005; Fournier, 1998).

### *1.1 Brand Personality*

Marketing practitioners as well as advertising experts (e.g., creative and copywriter) have been the first ones to coin the term ‘brand personality’ long before the research scholars acknowledged and studied the concept (Azoulay & Kapferer, 2003). In 1958, Martineau initially employed the word ‘character’ to refer to the non-material aspects that make a store distinctive and special (Martineau, 1958). It is argued that the things consumers buy are seen to have special meanings (both personal and social) in addition to their functions (Levy, 1959). The classic work by Evans in the early 1960s represents a major effort over the years to profile buyers versus non-buyers, where he attempted to profile Chevrolet users versus Ford users on various personality traits (Plummer, 1985). The study illustrated that brands

can be characterized by personality descriptors such as cheerful, youthful, mature, and mysterious (Evans, 1968).

Brand personality is based on the brand-as-person perspective (Aaker, 1996). Through the interactions with products and communication, consumers come to personify brands as having personalities (Rutter et al., 2018). It is argued that people choose their brands the same way they choose their friends (King, 1970). The symbolic use of brands is possible because consumers often imbue brands with human characters or personality traits (Aaker, 1997). Animism, anthropomorphization, and personification are terms that potentially explain why a brand can resemble human personality (e.g., Aaker, 1997; Clancy & O'Loughlin, 2002; Davies, Chun, Silva, & Roper, 2004; Gilmore, 1919; Ogilvy, 1983; Plummer, 1985).

### *1.2 Definition of Brand Personality*

Brand Personality research originated from the field of psychology (Plummer, 1985). The word *persona* (Latin) or *prosopon* (Greek) originally referred to the masks worn by actors on the stage ("Persona," n.d.). The study of personality can be comprehended as the study of 'masks' that people wear, project and display; and also includes the private and inner parts of psychological experience which we collectively call our 'self' ("The Word 'personality' Derives From the Latin," n.d.).

Over the years, researchers who are interested in brand personality, have been attempting to conceptualize what brand personality is referring to. Plummer (1985) proposed that the characterizational aspects of the brand, for example, modern/old-fashioned or lively/exotic, are what we call brand personality. In addition, brand personality is presumed to represent the values and beliefs of a culture (Aaker, Benet-Martinez, & Garolera, 2001; Sung & Tinkham, 2005).

The most widely agreed-upon definition of brand personality is proposed by Aaker (1997, p. 347). She defined brand personality as "the set of human characteristics associated with a brand." In a slightly different vein, Fournier (1998) stated that brand personality can be thought of as a set of trait inferences that cohere into a role perception of the brand as a partner in the relationship dyad (Fournier, 1998).

However, some scholars criticized that Aaker's brand personality definition is too wide and loose. The Aaker's (1997) definition of brand personality conceivably refers to almost everything related to human being and applied to brands and thus includes non-physical attributes connected to brands such as age, gender, social class and/or intellectual abilities. While personality is only one part of brand identity proposed by Kapferer (1992) (see Figure 1), Aaker (1997), in the process of building a scale to measure brand personality, defined brand personality not as a part but as the whole. Some scholars have agreed and suggested that these characteristics should be excluded from the brand personality scale (Azoulay & Kapferer, 2003; Bosnjak, Bochmann, & Hufschmidt, 2007; Geuens, Weijters, & Wulf, 2009; Milas & Mlačić, 2007) as there is a risk of mixing up conceptually and empirically separated and differentiated brand identity dimensions within a single scale of so-called 'brand personality' (Azoulay & Kapferer, 2003).

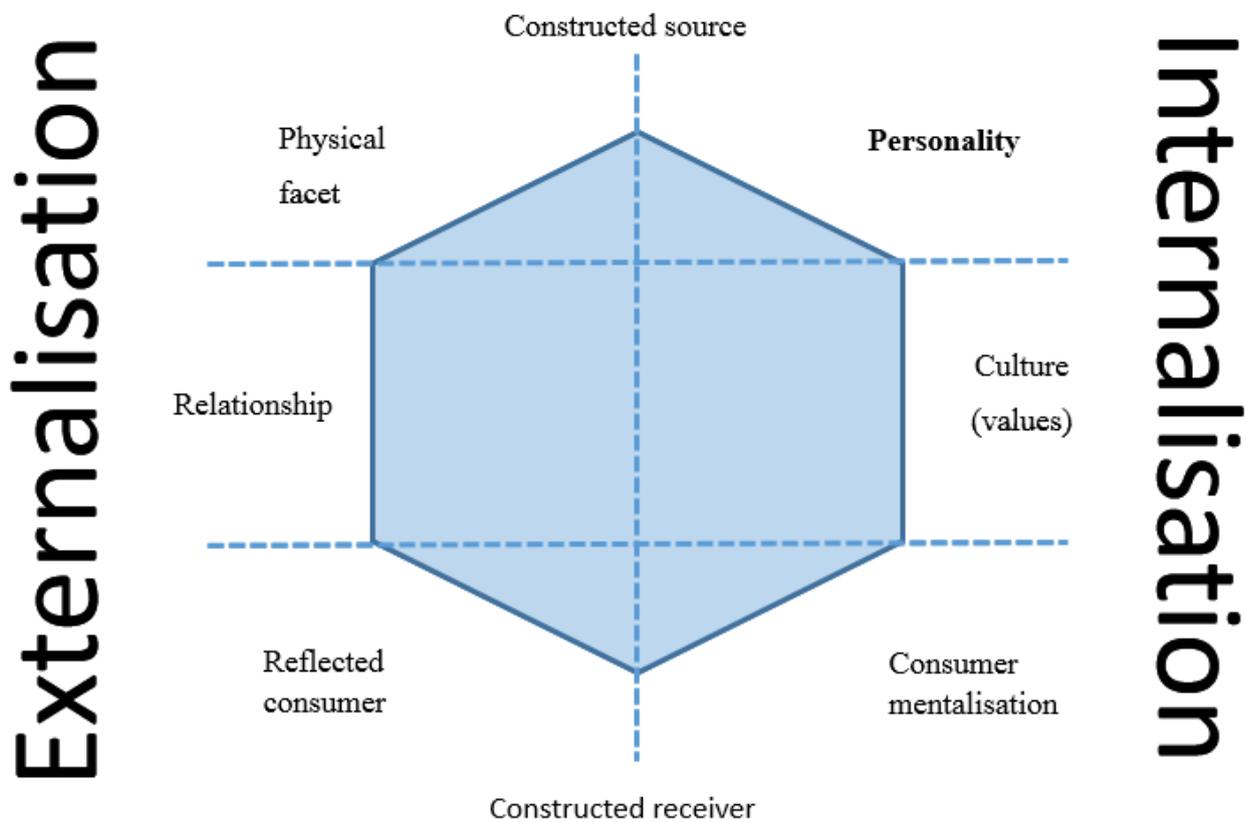


Figure 1: Brand Identity Prism (Kapferer, 1992)

It is maintained that the definition should remain close to that used in psychology, where the concept of personality was originated and has been refined for decades (Churchill, 1979; Plummer, 1985). Azoulay and Kapferer (2003) proposed supposedly a clear and pure definition of brand personality as the unique set of human personality traits both applicable and relevant to brands. This definition has also been extensively adopted by several studies (Bosnjak et al., 2007; Geuens et al., 2009; Milas & Mlačić, 2007).

### 1.3 Brand Personality scales

There are two main categories of brand personality scales. The first category of brand personality scales is ad hoc (Malhotra, 1981; Kassanjian, 1971). The ad hoc scales typically are composed of a set of traits ranging from 20 to 300 (Aaker, 1997). However, these scales are taken directly from personality psychology and often developed for the purposes of a specific research study; thus are not validated in the context of brands and tend to be atheoretical in nature. In addition, the selected personality traits are often chosen arbitrarily, which casts doubt on the scales' reliability and validity (Aaker, 1997). The second category of brand personality scales is a generalized scale that is more theoretical in nature as it is based on human personality scales (e.g., Bellenger, Steinberg, & Stanton 1976; Dolich, 1969).

In 1997, Aaker was the first one who attempted to develop a theoretical framework of the brand personality construct within the U.S. population. Traits were extensively gathered from a variety of sources, including psychology literature, personality scales used by marketing scholars and practitioners, and the original qualitative research. All available traits were

reduced to a more manageable number of 114 traits. In terms of stimuli, a set of 37 brands that cover 1) utilitarian, 2) symbolic, and 3) both utilitarian and symbolic function, were used in order to develop a systematically reliable, valid, and generalizable scale to measure brand personality. The 114 x 114 correlation matrix was factor-analyzed using principal analysis and varimax rotation. The result showed that there are five factors or dimensions: sincerity, excitement, competence, sophistication, and ruggedness. Also, there was a test-retest reliability to verify whether the results will be the same with a different group of stimuli and samples by reducing it to 42 traits. The confirmatory factor analysis showed that the results of the study on the first and second group are the same on the aspects of numbers and dimensions.

Figure 2 illustrates Aaker's (1997) brand personality scale, which consists of five dimensions and fifteen facets. The first dimension is sincerity and comprises of four facets: down-to-earth, honest, wholesome, and cheerful. The second dimension is excitement, which contains four facets: daring, spirited, imaginative, and up-to-date. The third dimension is competence, which encompasses three facets: reliable, intelligent, and successful. The fourth dimension is sophistication, involving two facets: upper class and charming. The fifth dimension is ruggedness, including two facets: outdoorsy and tough.

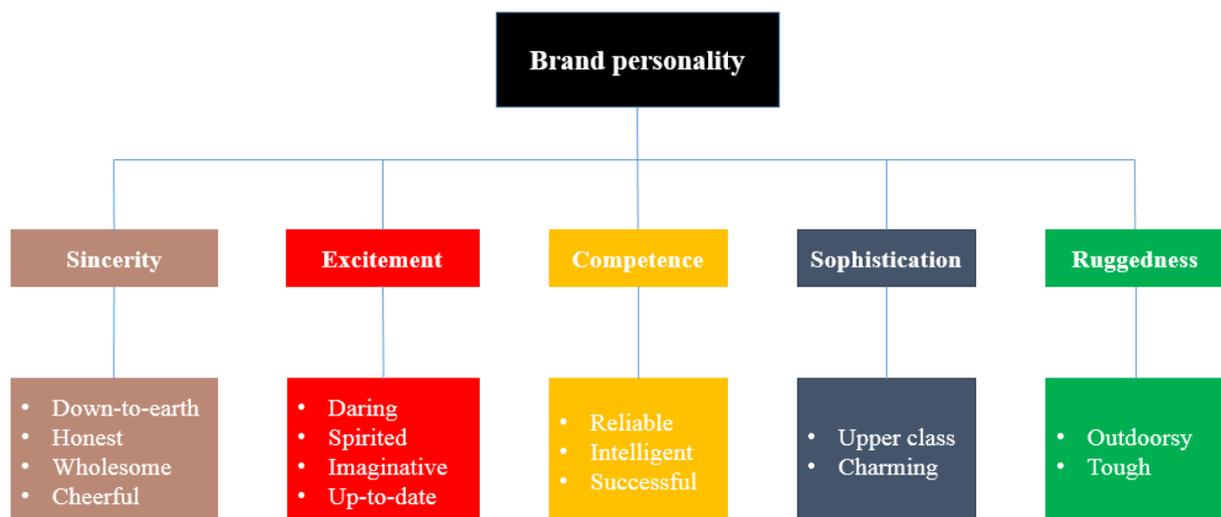


Figure 2: Brand Personality Framework (Aaker, 1997)

A number of studies have endeavored to develop, replicate, and extend brand personality scales in various categories (see Table 1), for instance, products (e.g., Aaker, 1997; Ferrandi, Valette-Florence, & Fince-Falcy, 2000; Smit, van den Berge, & Franzen, 2002), stores (e.g., d'Astous & Levesque, 2003), destinations (e.g., Davies et al., 2004; Hosany, Ekinci, & Uysal, 2006), non-profit organizations (e.g., Venable, Rose, Bush, & Gillbert, 2005) and cities (e.g., Glinska & Kilon, 2014). It can be seen from the table that the study of brand personality scales was mainly conducted in different product categories. However, over the past decade, there has been an attempt to start using brand personality scales to measure other categories, including online and corporate (Davies et al., 2004; Okazaki, 2006).

Moreover, there are many researchers who even compare brand personality scales in different countries (Bosnjak et. al., 2007; Khandai et. al., 2015; Sung & Tinkham, 2005; see Table 1).

One of the studies that followed Aaker's (1997) brand personality scale was conducted in the U.S., Japan and Spain (Aaker et al., 2001). The results indicated that the common factors between America and Japan are sincerity, excitement, competence, and sophistication. While Japanese cultural specific factor is peacefulness, American cultural specific is ruggedness. On the other hands, the findings revealed that the common factors between America and Spain are sincerity, excitement, and sophistication. Spanish cultural specific factor is passion, whereas ruggedness and competence belongs specifically to American culture.

	Aaker, 1997	Siguaw, Mattila, & Austin, 1999	Ferrandi, Lalitte-Florence, & Fine-Farcy, 2000	Aaker, Benet-Martinez, & Garolera, 2001	Capra, Barboranoff, & Garolera, 2001	Kim Han, & Park, 2001	Smit, van den Berge, & Guido, 2001	Austin, Siguaw, & Mattila, 2002	d'Antonio & Franzen, 2002	Davies, Chun, Vahus da Silva, & Roper, 2004	Sung & Tinkham, 2005	Venable, Rose, Bush, & Gilbert, 2005	Amoroso, 2006	Hosany, Ekinci, & Uysal, 2006	Okazaki, 2006	Zosjida, Buchannin, & Hufschmidt, 2007	Milas & Mlačić, 2007	Geuens, Wetzfers, & Wolf, 2009	Sophonsiri & Polvorat, 2009	Chu & Sung, 2011	Herzog & Merz, 2011	Gilinska & Kibon, 2014	Ho & Janda, 2014	Breuck & Kilianse, 2015	Khandai, Agrawal, & Gulla, 2015	Ahmad & Thyagaraj, 2017	Esmelipour & Hosain, 2017	Ahna & Ahmed, 2018
<b>Type of Category</b>																												
• Products																												
• Services																												
• Stores																												
• Industries																												
• Cities/Destinations																												
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• Saudi Arabia																												
• Thailand																												

Table 1: Study of Brand Personality Scales in Different Product Categories and in each country worldwide.

Furthermore, Table 2 compared all the research on brand personality scales from 1997 up until now. It can be noticed that there are over seventy brand personality dimensions in total. The evidence from several studies suggested and confirmed that the numbers and aspects of brand personality dimensions may vary in different countries and cultures (e.g., Ahmad & Thyagaraj, 2017; Geuens et al., 2009; Khan & Ahmed, 2018; Khandai et al., 2015; Milas & Mlačić, 2007). Surprisingly, even the study of brand personality scale within the same country might not yield the same results. For example, Khandai, Agrawal, and Gulla (2015) found four personality dimensions: sincerity, excitement, sophistication, and rugged in India. Whereas Ahmad and Thyagaraj (2017) discovered six personality dimensions: sophistication, excitement, popularity, competence, trendiness, and integrity. Moreover, the results of brand personality research in America were also different when the studies were conducted using different categories of product (Austin, Siguaw, & Mattila, 2003).

Additionally, Sung and Tinkham (2005) argued that countries that are quite different in their values and beliefs (e.g., Western vs. East Asian cultures) tend to display culture-specific differences in brand personality dimensions. The authors examined the brand personality of a

set of 100 global brands from 18 industry categories in the U.S. and Korea. The results showed 6 common dimensions and the two unique cultural specific factors in America (white collar and androgyny) and Korea (passive likeableness and ascendency)

Table 2: Dimension Variation in Brand Personality Scales

	Aaker, 1997	Sigauw, Mattila, & Austin, 1999	Ferrandi, Vigneres-Florence, & Fine-Foley, 2000	Aaker, Benet-Martinez, & Fournier, 2000	Caparrós, Barba-Muñoz, & González, 2001	Kim, Han, & Park, 2001	Smit, van den Broek, & Groot, 2001	Austin, Sigauw, & Franzen, 2002	d'Assonç, & Mattila, 2003	Davis, Chiu, Yim, & Franzen, 2003	Singh & Tamkum, 2003	Yamada, Ross, Bush, & Roper, 2004	Yamada, Ross, Bush, & Roper, 2004	Ambrose, 2006	Hosany, Ekinci, & Gilbert, 2005	Okazaki, 2006	Okazaki, 2006	Brosigke, Bradburn, & Hirschmann, 2007	Miles & Macle, 2007	Greens, Weibers, & Witt, 2009	Sydnor & Polson, 2009	Chu & Sims, 2011	Herrig & Meyer, 2011	Ginska & Kaba, 2014	Ha & Janda, 2014	Brenco & Kilduff, 2015	Khanlou, Asgari, & Goh, 2015	Almad & Thyagaraj, 2017	Esmaeilpour & Hosaini, 2017	Khan & Almad, 2018		
Number of Dimension	9	9	9	7	9	9	6	9	9	7	11	4	9	9	9	4	9	9	9	4	6	9	8	9	9	4	9	9	7	N/A		
Activity																																
Affectionate																																
Affluence																																
Aggressiveness																																
Agreeableness																																
Androgyny																																
Ascendency																																
Assurance																																
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Body																																
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Conscientiousness																																
Conservatism																																
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Extraversion																																
Fallacious																																
Femininity																																
Friendliness																																
Gentle																																
Genuineness																																
Heart																																
Informality																																
Integrity																																

Table 2: Dimension Variation in Brand Personality Scales (Continued)

	Aaker, 1997	Sigauw, Mattila, & Austin, 1999	Ferrandi, Vigneres-Florence, & Fine-Foley, 2000	Aaker, Benet-Martinez, & Fournier, 2000	Caparrós, Barba-Muñoz, & González, 2001	Kim, Han, & Park, 2001	Smit, van den Broek, & Groot, 2001	Austin, Sigauw, & Franzen, 2002	d'Assonç, & Mattila, 2003	Davis, Chiu, Yim, & Franzen, 2003	Singh & Tamkum, 2003	Yamada, Ross, Bush, & Roper, 2004	Yamada, Ross, Bush, & Roper, 2004	Ambrose, 2006	Hosany, Ekinci, & Gilbert, 2005	Okazaki, 2006	Okazaki, 2006	Brosigke, Bradburn, & Hirschmann, 2007	Miles & Macle, 2007	Greens, Weibers, & Witt, 2009	Sydnor & Polson, 2009	Chu & Sims, 2011	Herrig & Meyer, 2011	Ginska & Kaba, 2014	Ha & Janda, 2014	Brenco & Kilduff, 2015	Khanlou, Asgari, & Goh, 2015	Almad & Thyagaraj, 2017	Esmaeilpour & Hosaini, 2017	Khan & Almad, 2018		
Number of Dimension	9	9	9	7	9	9	6	9	9	7	11	4	9	9	9	4	9	9	9	4	6	9	8	9	9	4	9	9	7	N/A		
Intellect																																
Introversion																																
Joyfulness																																
Likeableness																																
Liveliness																																
Machismo																																
Mind																																
Neatness																																
Nurturance																																
Openness																																
Other																																
Passion																																
Passive Likeableness																																
Peace																																
Peacefulness																																
Performance																																
Popularity																																
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Reliability																																
Responsibility																																
Responsiveness																																
Robustness																																
Ruggedness																																
Ruthlessness																																
Sensation																																
Simplicity																																
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User-friendliness																																
Virtuousness																																
Western																																
White Collar																																

#### *1.4 Brand Personality vs Human Personality*

One of the first psychologists who structurally constructed a personality theory was Freud. Three basic configurations of the personality are proposed: the id, the ego, and the superego. Personality is generally defined by psychologists as the "systematic description of traits" (Khandai et al., 2015; McCrae & Costa, 1987). Allport (1961) suggested that personality is the vibrant organization within the individual that determines his/her characteristics, behavior, and thought. Similarly, Jung (1997) stated that people can be characterized by their conscious and unconscious thoughts, feelings, and behavior; and functions as a guide to the social and physical environment. Therefore, the personality is considered to be something dynamic and cumulative, and yet being durable and relatively stable (Azoulay & Kapferer, 2003).

A number of researchers have been involved in the process of developing the current widely-used scale to measure human personality. For instance, Allport and Odberg (1936) initially developed a list of terms in the English language characterizing personal behavior and personality, which lessened the haphazard use of traits-names. In 1945, Cattell began to employ empirical procedures to the task of constructing a personality-taxonomy with a perusal of English personality-descriptive terms (Goldberg, 1990). He carried out on a population of 208 mature adult men, of diverse occupations, and a set of 35 personality variables, yielded twelve factors; factor A to L (Cattell, 1945). Only five factors proved to be replicable in other studies (e.g. Digman & Takemoto-Chock, 1981; Fiske, 1949; Norman, 1963; Tupes & Christal, 1961). Moreover, similar five-factor structures based on other sets of variables have been reported by Borgatta (1964), Digman & Inouye (1986), and McCrae and Costa (1985, 1987). The so-called 'Big Five' of human personality traits are well known as OCEAN or CANOE: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism ("Big Five personality traits," n.d.; McCrae and Costa, 1987, 1992).

Openness is best characterized by original, imaginative, broad interests, and daring. Conscientiousness in this sense should be dutiful, scrupulous, and perhaps moralistic. Extraversion represents sociable, fun-loving affectionate, friendly, and talkative. Agreeableness encompasses warmth, a preference for cooperation over competition, and the trust and acceptance of others. Neuroticism defined by such terms as worrying, insecure, self-conscious, and temperamental (McCrae and Costa, 1985, 1987, 1992).

While human personality traits are inferred from attitudes and beliefs, physical and demographic characteristics, and individuals' behaviors (Plummer, 1985; Shank & Langmeyer, 1994; Sung & Tinkham, 2005), a brand's personality can be developed and shaped by any direct and indirect brand contact that the customer experience with the brand (Plummer, 1985; Shank & Langmeyer, 1994).

As a result, brand personality and human personality are not completely corresponding (Sung & Tinkham, 2005). Only three brand personality dimensions relate to three of the 'Big Five' human personality dimensions (i.e., agreeableness and sincerity both capture the idea of warmth and acceptance; extroversion and excitement both connote the notions of sociability, energy, and activity; conscientiousness and competence both encapsulate responsibility, dependability, and security), whereas two dimensions (Sophistication and Ruggedness) differ from any of the "Big Five" of human personality (Aaker, 1997; Briggs 1992; Geuens et al., 2009).

In terms of cross-cultural robustness, personality research has shown that the 'Big Five' factor configuration is able to describe human personality structure well across a wide variety of cultures. This suggests that the structure of human personality trait is universal (Bosnjak et al., 2007; McCrae, 2001, 2002; McCrae & Allik, 2002). In contrast, cross-cultural research on brand personality employing Aaker's (1997) approach has shown considerable differences between cultures, with respect both to the number of dimensions extracted and their meaning for Japan and Spain (Aaker et al., 2001), American and Korea (Sung & Tinkham, 2005), and Germany (Bosnjak et al., 2007).

## **2. Conclusion and Discussion**

The objective of this paper is to systematically review the brand personality construct by comparing its definitions and the measurement scales, which are varied widely across product categories and countries in terms of the numbers and aspects of personality dimensions. To identify the brand personality dimensions, the authors gathered all key studies on brand personality scales from 1997 up until now. Aaker (1997) was the first one who formally developed a theoretical framework of the brand personality construct in the United State. The results of an exploratory principal components factor analysis revealed five distinct personality dimensions consumers perceived: sincerity, excitement, competence, sophistication, and ruggedness. Thenceforth, there have been numerous researchers who replicate, extend, and even compare and contrast brand personality scales in many different countries. The results of this critical review paper pointed out that brand personality scales are varied across countries or cultures. This is possibly because the personality traits of the people associated with the brand are transferred directly to the brand (McCracken 1989). In other words, cultural meaning is transferred to a particular consumer good/object, and then the meaning is drawn from the good/object and transferred to an individual consumer (McCracken 1986). As the environment has an impact on personality, it is possible that brand personality scales that are measured in each country gain an impact from beliefs, thoughts, and values from that particular culture; and therefore affects the interpretation of brand personality based on the cultural context.

Although the brand personality concept and scales have been theoretically conceptualized and extensively developed for over decades, new studies on brand personality research in different product categories and across different countries are still emerging. Further research on Thai brand personality should be conducted to cover different product categories, including utilitarian, symbolic, and both utilitarian and symbolic products in order to develop a brand personality scale that can be used as a standardized scale in Thailand. A strong brand personality is invaluable to build brand equity, which can lead to a significant improvement of performance for Thai brands to effectively compete with mega brands in the global market.

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# THE APPLICATION OF CUSTOMER-BASED BRAND EQUITY (CBBE) IN A STORE CONTEXT: A CRITICAL REVIEW ON STORE EQUITY

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## **Abstract**

The Customer-Based Store Equity (CBSE) research in marketing and consumer behavior could be described as inconsistent, disjointed, and unsystematic. Most of the literature in the field has focused on conceptual model development, measures development, and identification of research lines. This paper analytically examines the research in CBSE literature over a decade. The result shows that the CBSE concepts from various studies differ considerably in terms of conceptualizations and dimensions as well as vary widely across constructs utilizations in a variety of contexts.

**Keywords:** *Store equity; Retailer equity; Store awareness; Store association; Store image.*

## **1. Introduction**

Brand equity has been a popular controversial concept recently. Brand equity is suggested by many researchers that it is one of the most valuable intangible assets; and has been prioritized for its importance to firm competitive advantage (Aaker, 1991; Keller, 1993; Roberts and Dowling, 2002). The concepts of brand equity have been applied to various aspects of business functions from both practical and research perspectives. During the last decade, brand equity concept has been utilized in the context of store as it is convinced to influence customer perception, attitude, behavior, and loyalty (Arnett, Laverie, & Meiers, 2003; Poppu & Quester, 2006; Jinfeng & Zhilong, 2009). Although there is a growing realization of the store equity concept, the contributions in the field are still contrasted and limited. The aim of this research is to critically review brand equity literatures in the store context to analyse how the brand equity models and constructs have been used; and to suggest directions for further research. More importantly, its practical implications are of significant concerns in view of the need for stores to articulate differentiation strategies based on sustainable competitive edges (Sales& Gil, 2007).

## **2. Literature Review**

From the business point of view, the key role of a brand is to create organizational value. Research scholars and practitioners have used the term “brand equity” to study the value created by the brand. Brand equity has been separately studied from two different perspectives: financial (Simon & Sullivan, 1993) and customer perspective (Aaker, 1991; Keller, 1993). While the financial aspect of brand equity focuses on the estimation of monetary value, marketers tend to devote their effort in evaluating the intrinsic value of the brand perceived by customers. [A1] This review focuses more on the Customer-Based Brand Equity (CBBE) than the financial-based brand equity.

## *2.1 The conceptualization of Customer-Based Brand Equity (CBBE)*

From the financial perspective, Simon and Sullivan (1990) define brand equity as the discounted future cash flows of a product with its brand name in comparison with the same product without its brand name. In contrast, Research on marketing has propose often that customers attach an added value to products through brand (Lassar, Mital, & Sharma, 1995; Yoo, Donthu, & Lee, 2000; Pappu & Quester, 2006). Such added value is defined as product brand equity based on customer perspective (Yoo et al, 2000). Aaker (1991, p. 15) initially conceptualizes brand equity based on customer perspective as “a set of assets (and liabilities) linked to a brand’s name and symbol that adds to (or subtracts from) the value provided by a product or service to a firm and/ or that firm’s customers”. Building upon Aaker’s (1991) definition, a number of researchers have made an attempt to define this Customer-Based Brand Equity (CBBE) as the accumulated attitudes of consumers (Ambler & Styles, 1995), preference (Park & Srinivasan, 1994), and perception (Krishna, Sullivan, & Groza, 2013) toward a brand.

Another approach to understand CBBE, Keller (1993, p.1) view CBBE as “the differential effect of brand knowledge on consumer response to the marketing of the brand”. Similarly, Ailawadi, Lehmann, & Neslin (2003, p.1) supported that CBBE can also be considered as “the marketing effects or outcomes that accrue to a product with its brand name compared with those that would accrue if the same product did not have the brand name”. Yoo, Donthu, & Lee (2000, p. 196) note that CBBE is “the difference in consumer choice between the focal branded and an unbranded product given the same level of product features”. Keller (1993) emphasizes that CBBE incorporate the concerns of the strength, attractiveness, and uniqueness of brands that are interactively assessed by consumers. These elements are affected by other properties of and relationships among the brand associations (Keller, 1993).

## *2.2 Customer-Based Brand Equity (CBBE) Models*

Customer-Based Brand Equity has been modelled from two major approaches, while the most widely accepted models are Aaker’s (1991) CBBE model and Keller’s (1993) CBBE model. It can be viewed that Aaker’s approach is a direct approach to explain brand equity whilst Keller’s approach could be seen as a comparative approach that compare the value added between a branded product and the same product without a brand.

Aaker (1991) proposes his CBBE model as four-dimensional model consisting of brand awareness, brand associations, perceived quality, and brand loyalty (Figure 1). Table 1 illustrates how the constructs are defined according to Aaker (1991) conceptuality.

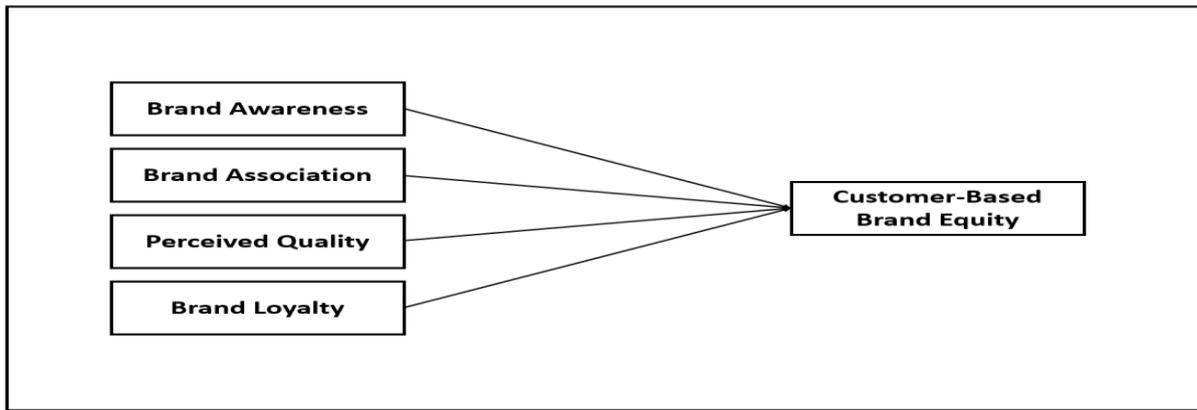


Figure 9 Aaker's (1991) CBBE Model

Table 2 Aaker's constructs in CBBE model

<b>Construct</b>	<b>Definition</b>
Brand Awareness	How quickly a consumer can retrieve brand elements stored in his/her memory. (adapted from Farquhar, 1989)
Brand Associations	Customer's thoughts, feelings, association, images and experiences toward a brand.
Perceived Quality	Consumer's perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives.
Brand Loyalty	A constructive mindset toward a brand leading to constant purchasing of the brand over time.

Another strong influential CBBE model among brand equity literatures is the Keller's (1993) model. Keller (1993) describes CBBE as general brand knowledge which arise from brand awareness and brand image while the awareness is seen as the launchpad to the construction of brand association (another term used for brand image) and finally to brand equity.

While the awareness consists of recall and recognition, a brand can build its association through attribute, benefits, and/or attitude (Keller, 1993). The power of association should be assessed in three major perspectives including strength, favourability, and uniqueness (Keller, 1993). Keller (1993) defines the title for the association between consumer and brand conceptualization as brand image. Burch (1969), Tasci and Knutson (2004), and Tasci and Boylu (2010) support that the role of association could help enhance consumers' information process capability, reduce uncertainty and risk, and induce positive feeling. Many CBBE related literatures use the term association directly without termed it as image (e.g., Boo, Busser, Baloglu, 2009; Kim & Kim, 2004, 2005; Kim, Kim, & An, 2003; Lassar et al., 1995; Tasci, 2016). Figure 2 illustrates Keller (1993) original framework.

Yoo and Donthu (2001) argue from their empirical study that awareness and association should be combining as a single construct. Washburn and Plank (2002) evaluate Yoo and Donthu's (2001) CBBE scale and then make the similar suggestion. However, Pappu, Quester, & Cookset (2005) argue that it requires further examination on whether awareness and association should be treated as a single construct in various circumstances as they found contradictory findings in the retailer context.

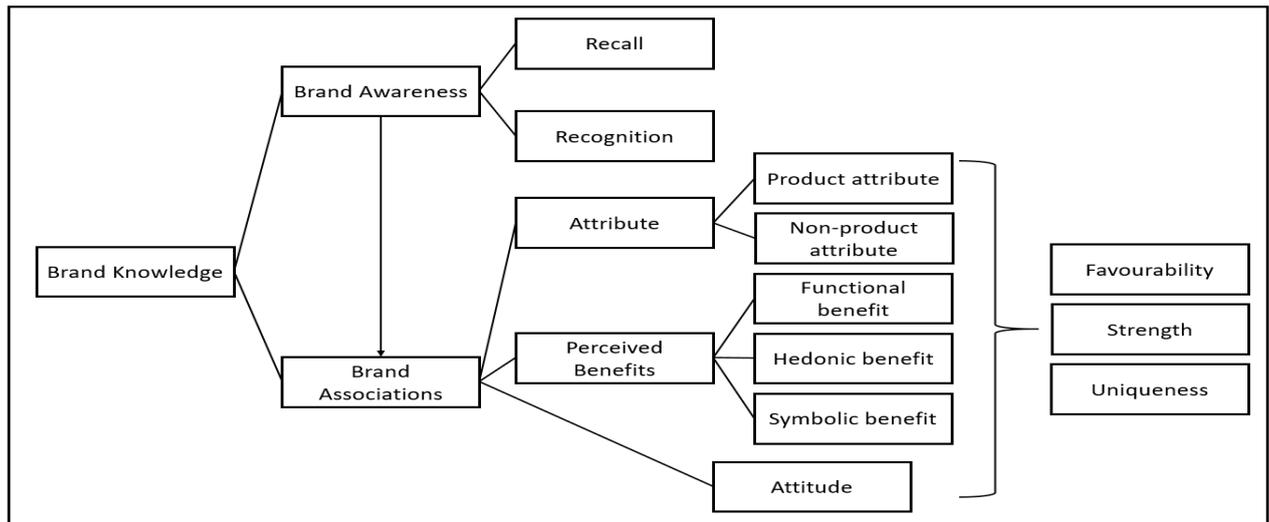


Figure 10 Keller's (1994) CBBE Model

While Aaker's (1991) and Keller's (1993) models have been widely applied to various marketing contexts, different study contexts may require some modification by adding or removing components such as sustainability (Baalbaki, 2012), attachment (Lassar et al., 1995), and uniqueness (Netemeyer, Krishnam, & Pullig, 2004). Additional constructs are viewed as contextual constructs rather than the generalized construct that contribute to the original models. From past to present, over 25 constructs have been applied to the CBBE concept using Aaker's (1991) and Keller's (1993) models as the foundation such as trust (Gil et al., 2016), satisfaction (Gil et al., 2016), innovation (Fuentes-Blasco et al., 2017), perceived price (Jinfeng & Zhilong, 2009), and Competitors' store accessibility (Swoboda et al., 2013).

### 2.3 The conceptualization and study of Customer-Based Store Equity (CBSE)

Aaker's (1993) and Keller's (1993) CBBE conceptualization has been applied to the store context with some variation (e.g. Arnett et al., 2003; Pappu & Quester, 2006; Jinfeng & Zhilong, 2009), defined the term Customer-Based Store Equity (CBSE) as the consumers' overall assessment of a retailer's channels as strong, attractive, and unique brands (Hartman & Spiro, 2005) is known to affect retailer performance and consumer behavior (e.g., Grewal et al., 2009). CBSE has been also termed retailer equity (Arnett et al., 2003; Pappu & Quester, 2006) or store value (Bign, Erreda, & Miquel, 2013). While the contribution to the field is seen limited, the main research purposes are to highlight the power of brand knowledge (Hartman & Spiro, 2005) and examine how to add store value over consumers (Jinfeng & Zhilong, 2009). The research focus found are conceptual model development (Hartman & Spiro, 2005; Swoboda, Schramm-Klein, & Morschett, 2009; Shen, 2010; Gil, Ruiz, & Berenguer, 2016), measures development (Arnett et al., 2003; Pappu & Quester, 2006), and identification of research lines (Grewal & Levy, 2007). However, recently, Fuentes-Blasco, Velazquez, & Servera-Frances (2017) suggest that the empirical evidence supports are still contrast and difficult to compare because of the diverse nature of variables, terms, and measures. The main interest on managerial implications perspectives are differentiation strategic development based on sustainable competitive advantages (Rintamaaki, Kuusela, & Mitronen, 2007; Sales & Gil 2007) in a rapidly changing and highly demanding environment. Additionally, enhancing the segmentation capability given the more relative efficiency in marketing strategies and techniques designs are suggested to have meaningful managerial implications for the field (Gil et al., 2016). The result of successful

inclusion of CBSE concept to store operation may create differential effects or value added to the store which results in better overall performance, positive customers' behavior toward the store, and stronger store loyalty (Burt & Sparks, 2002; Hartman & Spiro 2005; Jinfeng & Zhilong 2009).

#### *2.4 Customer-Based Store Equity Models and its constructs*

The conceptualization of CBSE has been progressed in several directions. Jinfeng and Zhilong (2009) suggest that the conclusion of CBSE is yet to be reached due to limited number of studies and the inconsistent dimensionality of generalized conceptual model, definition of terms, and constructs. This following section outlines the models suggested among literatures and explaining how each defines its construct.

### **3. CBSE models**

Referring to the Aaker's (1991) CBBE model, Lassar et al. (1995) emphasize to consider additional constructs to the brand equity concept such as trust and perceived value in the store context with the argument that consumers place high value on the brands that they trust, and consumer's store choice is made based on a perceived balance between the price and the utilities. A number of researchers in CBSE field applied Lassar et al. exploration to their conceptual models (eg. Koo, 2003; Jinfeng & Zhilong, 2009). During the same period of study CBSE, Arnett et al. (2003) propose CBSE model from direct application of Aaker's (1991) model considering retailer loyalty, name awareness, service quality and retailer associations as the independent constructs. Hartman and Spiro (2005) illustrates non-empirical based CBSE conceptual model from direct application of Keller (1993) suggesting that store awareness and store associations could explain the creation of store equity. Similar to Arnett et al. (2003), Pappu and Quester (2006) adopt Aaker's (1991) CBBE model as the foundation employing retailer awareness, retailer associations, retailer perceived quality, and retailer loyalty as the explanatory constructs. Jinfeng and Zhilong (2006) argue that in addition to the constructs suggested by Aaker's (1991) CBBE models, it is imperative to consider store's perceived quality, perceived value/perceived price, institutional factors, convenience, and physical facilities as these factors could be the critical criteria when consumers make a store choice, which is more specific in terms of locational focus and service nature in comparison to brand choice. Beristain and Zorrilla (2011) construct CBSE model includes awareness/association, store brand loyalty, price, store brand perceived quality, and store image as the constructs which the model is influenced by Aaker (1991) conceptualization; however, awareness and association are treated as a single construct. Swoboda et al. (2013) study CBSE in a complete different angle to the traditional Aaker's (1991) and Keller's (1993) models. He focuses on the location, accessibility, and competition as the main theme in his study. Swoboda et al. (2013) suggest store awareness, store accessibility, competitors' store accessibility, and competitive intensity as the explanatory constructs. Recently, Gil Saura (2017) applies Aaker's (1991) model but include the perceived quality of the brand that are placed in the store, namely perceived value, as he argue that this could be the influencing factor that affect consumers' store choice. Finally, Fuentes-Blasco et al. (2017) suggest that technological innovation could enhance the effectiveness in creating the equity for particular store. Table 2 provide summarized the constructs applied in CBSE literatures.

Table 3 Constructs applied in CBSE literatures

Store equity		Amet, et al. 2003		Hartman and Spro 2005		Pappu and Quester 2006		Jiteng and Zhilong 2009		Beristan and Zornilla 2011		Swoboda, et al. 2013		Gil Saura 2017		Fuentes-Blasco, et al. 2017	
Store loyalty	Retailer loyalty																
	Store loyalty																
	Store brand loyalty																
Store awareness	Loyalty																
	Name awareness																
	Store awareness																
Store perceived quality	Retailer awareness																
	Awareness/association																
	Awareness																
Store association	Service quality																
	Retailer perceived quality																
	Store brand perceived quality																
Perceived value/Perceived price	Store brand perceived quality																
	Retailer association																
	Store association																
Store accessibility	Awareness/association																
	Store image																
	Price																
Competitive intensity	Perceived value																
	Price																
	Store accessibility																
Store technological innovation	Competitors' store accessibility																
	Store technological innovation																
	Store marketing innovation																

The following sections explain how each constructs are being used in various CBSE literatures.

### *3.1 Store awareness*

From the assessment of existing evidence, researchers in the field widely accept that store awareness has significant relationship with the creation of store equity (Hartman & Spiro 2005; Pappu & Quester 2006; Jinfeng & Zhilong 2009; Swoboda et al. 2009). Arnett (2003) applied Keller's (1993) awareness conceptualization to store context ability to recall and recognize the store. In other words, the term is defined as the familiarity of the retailer name perceived by consumers while convinced that such awareness relates to ease in which a retailer name comes to mind. Many other literatures follow the same belief as Arnett (2003) while the expression may be used differently such as store awareness (Hartman & Spiro, 2006), retailer awareness (Pappu, et al., 2006; Jinfeng & Zhilong, 2009), awareness/association (Beristain & Zorrilla, 2011), and awareness (Gil Saura, 2017). Beristain and Zolrilla (2011) argue that awareness and association can be combined together as a single construct as they are interrelated as supported to Yoo and Donthu (2001)'s findings. However, while Pappu et al (2005) forewarn that further investigation is required as the finding may be varied from context to context, there are no validity test found in Beristain and Zolrilla (2011). All researchers agreed upon the Keller (1993) argument that awareness is the Launchpad leading the consumers to process other elements of brand equity.

### *3.2 Store Loyalty*

Referring to Aaker's (1991) CBBE model, Yoo and Donthu (2001, p.3) conceptualized 'brand loyalty' as "the tendency to be loyal to a focal brand, which is demonstrated by the intention to buy the brand as a primary choice". Similarly, Arnett et al. (2003, p.163) suggest that brand loyalty can be defined as "a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future despite situational influences and marketing efforts having the potential to cause switching behavior". Brand loyalty is determined as an isolated construct in Aaker's (1991) model. Many researchers in CBSE applied this construct in their models using different terms such as retailer loyalty (Arnett et al., 2003; Pappu and Quester, 2006, Jinfeng & Zhilong, 2009), store loyalty (Hartman & Spiro, 2005; Swoboda et al., 2013), store brand loyalty (Beristain & Zolrilla, 2011), and loyalty (Gil Saura, 2017). Loyalty, however, is not included in Keller's (1993) CBBE model, rather it is treated as dependent variable.

### *3.3 Perceived quality*

Perceived quality is another construct emphasized by Aaker (1991) while it is normally treated as a single independent construct in Aaker (1991) CBBE model. Sweeney and Soutar (2001) extend the Aaker (1991) operationalization (experienced by the consumers that consume a product or service) explaining that perceived value consists of three pillars including emotional value (Sales & Gil, 2007) (describe the feeling of customers after experience somethin), social value (sense of belonging of reference groups) (Sheth, Newman, & Gross 1991), and functional value (price offer and quality offer) (Sheth et al. 1991). While many brand equity researchers under store context applied this concept, the term used and contextual focus are varied. Arnett et al. (2003) term perceived quality as service quality. Pappu et al. (2006) define retailer perceived quality to represent perceived quality in store context. Store brand perceived quality is the term used by Beristain and Zorrilla (2011). All

these constructs are operationalized similarly to the Aaker (1991) definition. Jinfeng and Zhilong (2009) use employee service to explain retailer perceived quality.

In contrast, perceived quality is viewed as a part of brand association in Keller's (1993) CBBE model. This construct required assessment in three perspectives which are favourability, strength, and uniqueness (Keller, 1993) while Aaker (1991) argue that perceived quality can be measured with direct method as an isolated single construct and having direct impact to the brand equity itself. There are no CBSE literatures that applied perceived quality in Keller's (1993) conceptuality found.

### *3.4 Store Association*

From the existing evidence, association is, by far, the most controversial construct among the CBSE literatures. On the one hand, Aaker (1991) applied association as an isolated independent construct and suggested to have powerful impact on brand equity. On the other hand, association in Keller (1993) conceptuality is a combination of effects from three major constructs (attribute, benefit, and attitude) measured in terms of favourability, strength, and uniqueness. While a number of research apply association in store context from Aaker's (1991) model directly (eg. Arnett et al, 2003; Hartman & Spiro 2005; Pappu & Quester 2006; Jinfeng & Zhilong 2009), none applied proper Keller's (1993) approach. Although association in store context has been termed differently such as retailer association (Arnett et al., 2003; Pappu & Quester, 2006; Jinfeng & Zhilong, 2009), store association (Hartman & Spiro, 2005), awareness/association (Beristain & Zorrilla, 2011), and store image (Gil Saura, 2017; Fuentes-Blasco et al., 2017), most measure the association according to Aaker (1991) conceptuality. In other words, association remained as an isolated independent construct among CBSE context. No evidence found in any literature that apply association model based on Keller (1993), although the conceptualization may be referred to Keller (1993) in some literatures.

The general definition of association in store context is anything linked to the customer memory about the particular store (Pappu & Quester, 2006). Some apply cognition process from psychology literatures to explain the connection between awareness and association that the memory is constituted of pieces of information represented by nodes and connexions between the nodes, represented by associations, which is called a schema (Hartman & Spiro, 2005; Beristain & Zorrilla, 2011).

Jinfeng and Zhilong (2009) argue that association in store context have positive relationship with store loyalty as it influence commitment and choice of store in repeated visiting behavior. Yoo et al. (2000) influence many CBSE literatures implying that strong association have positive impact to equity. Arnett (2003) emphasizes that association in store context should be store specific; in other words, depends on particular store marketing strategies and tactics implementation.

Other influencing constructs to association have been suggested such as trust (store) (Pappu & Quester, 2006; Jinfeng & Zhilong, 2009; Beristain & Zorrilla, 2011), product quality and perceived quality (Arnett, 2003), institutional factors (Jinfeng & Zhilong, 2009), liking and pride (Pappu & Quester, 2006), convenient facilities (Pappu & Quester, 2006, Jinfeng & Zhilong 2009, Fuentes-Blasco, et al. 2017), store atmosphere (Hartman & Spiro, 2005, Pappu & Quester, 2006, Jinfeng and Zhilong, 2009, Fuentes-Blasco, et al. 2017), variety of products (Pappu & Quester, 2006), Trust (manufacturer) (Pappu & Quester, 2006, Jinfeng & Zhilong, 2009), attitudes towards a particular brand that the store carries (Arnett et al., 2003, Hartman

& Spiro, 2005), and attribute (Gil Saura, 2017) (table 3). For Arnett (2003), product quality and perceived value are treated as two separate constructs that influence association. Beristain and Zorrilla 2011 argue that association and awareness in store context should be considered as a single construct (Chowdhury, Reardon, & Srivastava, 1998; Yoo & Donthu, 2001), while Pappu and Quester (2006) argue that there are limited theoretical support for that. Both Aaker (1991) and Keller (1993) agree that awareness and association are conceptually different. Jinfeng and Zhilong (2009) conceptualize institutional factor as the reputation, popularity, and credibility of the store as store attribute that attract more attention, contacts and visits from potential customers. No discriminant analysis found for development purpose for these constructs in CBSE literatures. Favourability and uniqueness of association according to Keller (1993) are mostly mentioned in conceptualization part but found such conceptualization not included in hypothesis testing.

Table 4 Related construct included as part of the association

		Arnett, et al. 2003	Hartman and Spiro 2005	Pappu and Quester 2006	Jinfeng and Zhilong 2009	Beristain and Zorrilla 2011	Swoboda, et al. 2013	Gil Saura 2017	Fuentes-Blasco, et al. 2017
Store Association	Trust (store)								
	Product quality/Perceived value	■							
	Institutional factors			■					
	Liking			■					
	Pride			■					
	Perceived value/Perceived price	■							
	Convenient facilities			■					■
	Store atmosphere		■						
	Variety of products			■					
	Trust (manufacturer)			■					
	Perceived product quality/Store attitude	■							
	Attribute							■	
	Store accessibility of a focal retailer						■		
	Store accessibility of competitors							■	

Perceived value has traditionally been conceptualized as customers' evaluation of the trade-off between what they paid for and what they receive (Zeithaml, 1988). This conceptualization is viewed as part of functional benefit as well as hedonic and symbolic fulfilment. Some researchers involve this particular construct as it related to customers' store choice processing, while the term may be used in various version such as perceived value (Arnett, 2003; Pappu & Quester, 2006; Gil Saura, 2017; Fuentes-Blasco et al., 2017), and price (Beristain & Zorrilla, 2011) (table 2). While some literatures consider perceived value as part of the association (Arnett, 2003; Pappu & Quester, 2006) (table 3), others treat it as isolated independent construct to CBSE (Beristain & Zorrilla, 2011; Gil Saura, 2017; Fuentes-Blasco, et al. 2017) (table 2). General conceptualization of perceived value in CBSE context is viewed as the store offers reasonable price to the products that they sell. Although Aaker (1991) notes that CBBE is viewed based on competitive advantage with regards to nonprice competition, these literatures argue that value in this case is based on the feeling of fairness of what customers pay in comparison to what they get, instead of cheapest offer compared to competitors. Finally, Swoboda et al. (2013) suggest that focal store's accessibility and competitor store's accessibility could also be used to indicate the store association too, while focal store's accessibility is noted to have positive relationship with store association, vice versa.

### *3.5 Location, competition and technological innovation*

Location, competition and technological innovation have been involved in CBSE from the beginning. Long before the introduction of CBSE concept, location, competition and technological innovation have been perceived to be influencing factors to customers' store choice (Reilly, 1931; Huff, 1964; Achabal, Gorr, & Mahajan, 1982; Rust & Brown, 1986; Durvasula, Sharma, & Andrew, 1992). Several evidences have suggested location has positive relationship to store patronage, and store image (Lindquist, 1974; Mazursky & Jacoby, 1986). Drawing on the Becker's (1965) theory of the allocation of time and Reilly's (1931) law of retail gravitation, competitive intensity and nearest competitor distance are convinced to have relationship with customers' store choice. Various literatures suggest that the longer distance of the store the less likely that the store would be considered by consumers because consumers may not wish to drive long distances (Dellaert, Arentze, Bierlaire, Borgers, & Timmermans, 1998; Popkowski, Sinha, & Sahgal, 2004; Gijbrecchts, Kampo, & Nisol, 2008). Bell, Ho, & Tang (1998) argue that the location have been considered less important by the increasing mobility of consumers.

As CBSE concept introduced, many researchers convinced location embed itself as underlying part of perceived value and/or association. Some study also outlines the role of perceived value of local competitors in relation to focal store to have impact on customer's perception (Sirohi, McLaughlin, & Wittink, 1998). The mentioned literatures assist in illustrating how the strength of the effects of a focal retailer's retail brand equity and store accessibility varies through different local competitive situations (Seiders, Voss, & Grewal, 2005).

## **5. Discussion and further research directions**

The present study addresses several concerns indicating that CBSE research results are considered inconsistent, disjointed, and unsystematic. This section discusses the issues regarding to what we found from the review of literatures in CBSE field.

### *4.1 CBSE and stores' competitive advantage*

One major reason that CBSE concept has been popularized recently is there is a strong need for stores to improve differentiation strategies based on sustainable competitive advantages (Gil Saura, 2007). However, CBSE literatures operationalize competitive advantage as dependent construct differently such as Arnett et al. (2003) use retailer equity as the indication of competitive advantage while Jinfeng and Zhilong (2009) argue that further investigations are required to understand how store equity contribute to firm's competitive advantage. Yoo et al. (2000) note that the role of store equity in the organization's competitive advantage can be studied further, due to brand equity could enhance firm's competitiveness through value proposition to the organization and its customers, the employees, and the shareholders and management. This discussion implies that the implications of brand equity in relation to firm's competitive advantage are shown in different operationalization. Further investigation on the relationship between competitive advantage and store equity may lead to a more consistency of CBSE implication.

### *4.2 Brand vs Store conceptualization*

CBSE borrows several concepts from CBBE for conceptual, theory, and measures development purposes. Based upon the preceding discussion, it can be seen that brand and

store have some similarities and differences in many points of view. However, as CBSE draws concepts and constructs from CBBE, it is imperative to have strong supports on how the particular concepts and constructs fit to the store context. Such concern has been emphasized in CBSE literatures such as Pappu and Quester (2006) suggest further research direction regarding to this concern through the emphasis of Keller's (1993) three types of associations: attributes-based, benefits-based, and attitudes-based; since the element 'retailer association' can be based on specific store category, future research could apply exploratory research such as focus groups to extract category-specific retailer associations for incorporating them in the measurement. Finally, Pappu et al. (2005) noted that the CBSE research does not present enough empirical evidence to illustrate the structural comparison of retailer equity and brand equity. It is worth noted that further research should emphasize such concern.

#### *4.3 Brand personality as a construct in CBSE*

Yoo and Donthu (2001) have suggested including brand personality measures in the measurement of brand equity. Recently, d'Astous and Levesque (2003) purpose the store personality concept and future researchers may consider to include store personality measures in the measurement of store equity in their model. Brand personality has been emphasized as further research suggestion in many CBSE literatures (eg. Pappu & Quester, 2006; Beristain & Zorrilla, 2011), while the arguments for not include personality in their CBSE model are the complexity regarding to measuring this construct and the necessity to prevent making the survey excessively long. Future researchers are suggested to incorporate personality dimension when examining the CBSE.

#### *4.4 The item "store association" in CBSE concept*

The view on association perceived by CBSE researchers still diverse. According to Aaker's (1991) model, association is treated isolated from perceived quality and loyalty. The assessment of association does not incorporate the investigations on favourability, strength, and uniqueness; it rather measures the direct indication of association (eg. Arnett, et al., 2001). In Keller (1993) perspective, association has been viewed conceptually different. Association, in Keller (1993) conceptuality, involves perceived value as well as attribute, benefits, and attitude as parts of the association. While Keller (1993) association conceptuality has been widely applied in many CBSE literatures, such conceptualization is not embedded as a measure in the CBSE models. This may due to complexities in constructing the measurement method to effectively indicate the degree of favourability, strength and uniqueness of association constructs. Future research could further develop and validate the scale for CBSE.

#### *4.5 Limited scope in studying the store*

The present study recognizes the potential concern of CBSE on relation to its study scope. Jinfeng and Zhilong (2009) note that CBSE research need to be replicated with a more variety of store categories such as department store, convenience store and specialty store, and in various samples that contain diverse characteristics. The present review acknowledges that most literature provide empirical support only from brick-and-mortar store. Hartman and Spiro (2005) emphasize that further assessment in various competitive environments (i.e., catalogue retailing, and e-commerce retailing) would enhance our understanding on how operationalization of CBSE support the ability to predict customer behaviors. Therefore, broadening the study scope should offer insights for strengthening the CBSE concept.

## 5. Conclusion

This present study outlines the possible issues that explain why the findings among CBSE studies experiences inconsistent, disjointed, and unsystematic. The investigation provides the fundamental that allows us to understand why the direction of CBSE studies is seen not united. Finally, the present study identifies the research gap and gives suggestion to further research directions that the authors hope they would shape the CBSE field to reach its new heights.

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# THE INFLUENCE OF TOP MANAGEMENT TEAM BACKGROUNDS ON BRIBERY PRACTICES

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## Abstract

This study examines the influence of top management team backgrounds on bribery decision. Drawing upon research on upper echelons and literature on bribery practices, I propose how the top management team characteristics, namely gender, average age, functional experience, and ex-government officials, impact firm engaging in bribery practices differently. Expected results and implication for future research are discussed.

**Keywords:** *Top Management Team; Upper Echelons; Bribery.*

## 1. Introduction

Many government and non-government institutions around the world have put forth considerable effort to eliminate bribery practices. However, such practices still widely exist among business organizations in both developed countries and emerging market economies (Beets, 2005; Spencer & Gomez, 2011). Bribery practices have received a higher degree of attention across ideological cultures since 2000s (Hunt, 2004). While it is difficult to obtain the actual value of bribery (Noonan, 1987), it is estimated that the amount of bribery payment by business organizations and individuals is more than \$1 trillion per year –approximately GDP of Mexico in 2016 (Mazar & Aggarwal, 2011). According to OECD (2014), it is found that senior management was engaged in bribery practices over 50% of cases. There were many bribing scandals that shocked the world. For example, Walmart, a multinational retailer, engaged in bribery practices to clear the way for construction of new stores in order to make firm itself outflank competitors in Mexico (Economist, 2012). Less whistleblowers commits doing such practices because it will be threats for stakeholder support and hurt legitimacy (J. D. Collins, Uhlenbruck, & Rodriguez, 2009), whereas it has left government officials look over their shoulders. Despite efforts to eliminate bribery practices, many business organizations still engage in bribery because bribery helps speeding up approvals and processes (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002; Oak, 2015), avoidance the regulations (Ali & Isse, 2003; Susan Rose-Ackerman, 1999), and minimize risk and uncertainty (Della Porta & Vannucci, 1999; Mauro, 1995). Such preferential benefits supports firms by allowing them to focus in their strategic development (Spencer & Gomez, 2011; J. Q. Zhou & Peng, 2012) and at the same time overcome the potential obstacles in their strategic endeavors (H. Li, Meng, Wang, & Zhou, 2008).

Nowadays, research on top management team or TMT hereafter spans many disciplines such as economics (Hambrick, Cho, & Chen, 1996; Michalisin, Karau, & Tangpong, 2004), sociology (D'Aveni & Kesner, 1993), and psychology (Hambrick, 2007; Hambrick & Mason, 1984). Studies of TMT focusing on firm performance are becoming more prevalent (Barnes, 2003; Buyl, Boone, Hendriks, & Matthyssens, 2011) with the increase in globalization, and diversity in the workplace. TMT has been growing recognition that helps drive firm, even though the result is rather difficult to quantify. Rather, TMT characteristics are used as control variables. Additionally, TMT evaluate firm performance to identify firm potential and close capability gap. Therefore, TMT is an effective vehicle of competitive advantage (Barney, 1991). Even if the firm is recognized as having strong and capable TMT, there is a

causal ambiguity in the sense that it can be difficult for other firms to identify the specific cause of what makes TMT strong and capable.

The breadth of knowledge regarding TMT has focused primarily on how firms can further enhance their competitiveness and predict the outcomes of their competitive moves. Studies have shown that demographic characteristics influence TMT's decision making. However, most studies of TMT do not address how the characteristics of TMT act as antecedents to firms engaging in bribery. This study addresses the need to connect research on bribery and TMT characteristics and directly investigates one related question: How do TMT characteristics affect bribery practices?

To establish new understanding, I extend prior research (J. D. Collins et al., 2009; Daboub, Rasheed, Priem, & Gray, 1995) by studying the impacts of TMT characteristics on bribery practices. My base theoretical arguments are primarily anchored in how demographic characteristics such as gender, average age, functional experience and ex-government officials impact on firms engaging in bribery practices. One view, rooted in upper echelons theory, considers the effects of the characteristics of TMT on their decision making. An alternative research, drawing from corruption and bribery, identifies firms whose decisions lead to engage in bribery practices. Given diverse theoretical assumptions, announcement of bribery practices reflect bad vision of top management team as well because firms are top management team's reflection (Hambrick & Mason, 1984). This investigation has focused on firm level. This research makes a major contribution to the literature. I contribute to upper echelons theory by explaining how demographic characteristics such as gender, average age, functional experience, and ex-government officials impact relationships between context and firms engaging in bribery. I then propose that male TMT and firms with more ex-government officials are more likely to engage in bribery practices whereas older TMT and TMT whose background has variety of specific functional experience are less likely to engage in such practices.

In the following sections, I provide a background of the literature on bribery practices and top management team characteristics. Next, I propose the effects of TMT background on bribery practices. I then theorize how this relationship may be different in bribery practices. Finally, I discuss the implications of theory and practices.

## **2. Bribery Practices and Top Management Team**

### *2.1 Bribery Practices*

Bribery occurs when firms are willing to pay special payoffs to public officials in order to gain preferential support, and at the same time, public officials are willing to receive such special payoffs from firms in exchange for providing them with preferential supports (Bardhan, 1997; Martin, Cullen, Johnson, & Parboteeah, 2007; Susan Rose-Ackerman, 1978; Svensson, 2003; Treisman, 2000). Such favor granting is possible since government officials have discretionary power over the distribution of resources to the private firms (Susan Rose-Ackerman, 1978). The topic of bribery has been studied in many disciplines such as strategy (S. Li & Ouyang, 2007; Weitzel & Berns, 2006; X. Zhou, Han, & Wang, 2013) and economics (Čábelková & Hanousek, 2004; Sanyal, 2005). Most of these studies examine bribing firms either the demand side or the supply side. Research on the demand side focuses on government officials' demands for bribery, and is typically measured through indices such as Corruption Perception Index (CPI) (Friedman, Johnson, Kaufmann, & Zoido-Lobaton, 2000; Getz & Volkema, 2001; Wu, 2005) and Bribe Payers Index (BPI) (Sanyal & Samanta,

2011). Whereas research on the supply side focuses on firms' direct engagement in the bribery process (Chen, Yaşar, & Rejesus, 2008; Gao, 2011; Huang & Rice, 2012; Sanyal & Samanta, 2011; Shengtian & Zhang, 2014; Sung, 2005).

Firms engage in bribery practices for a variety of reasons. Firms may use bribery to overcome institutional barriers that are typically found in emerging or weak economies. Luo (2005) argued that bribery can be an effective strategic instrument for overcoming a lengthy regulatory process. de Jong, Tu, and van Ees (2012) suggested that bribery can be effective in overcoming bottlenecks. Tonoyan, Strohmeyer, Habib, and Perlitz (2010) argue that entrepreneurs and small business owners in emerging markets participated in malpractice such as corruption because of the inefficiency of the financial and legal institutions in their environment (Barth, Lin, Lin, & Song, 2009), lack of their enforcements, and the closeness of the social network relationship under formal and informal institutional contexts.

Bribery can provide firms with resources that will help them gain a competitive edge over its competitors (Martin et al., 2007; Wu, 2005; X. Zhou et al., 2013). Ayyagari, Demirgüç-Kunt, and Maksimovic (2014) found that smaller entrepreneurs bribe a higher proportion of their revenues in order to gain such competitive edge over larger firms. Firms also bribe to obtain licenses and permits that will help them gain access to new market in order to increase their competitive position over rivals (Lee & Weng, 2013). Firms also bribe to gain control over environmental resources needed to survive (Boddewyn & Brewer, 1994; Martin et al., 2007). In particular, smaller firms are more likely to pay bribes than larger firms due to their lack of critical resources, and their comparatively low bargaining position against competitors (Svensson, 2003). In the context of low bargaining position against government officials, Bailey (2015) found that firms may have few choices and must accept government officials' demand in order to survive. In addition, legitimacy is very important to firm because it provides them with access to key resources and support from the society (Suchman, 1995). Positive relationships with government officials will allow firms to gain access to government officials who hold valuable resources that are vital to their profitability and survival. As such firms will adapt to government officials' demands in order to survive institutional environment (Kostova & Roth, 2002; Oliver, 1991; Rodriguez, Uhlenbruck, & Eden, 2005). While bribery may support firms without harming to the economy in the short term (Susan Rose-Ackerman, 2002), extant research have found that it harms both firms and the economy in the long term. Whenever bribery occurs, it distorts market competition (Hamra, 2000) and reduce the ability of government officials to impose regulations to correct for market failures. Moreover, it disrupts distribution, destroys incentives to compete under market competition, undermines market efficiency, denies people the right to a minimal standard of living, and harms social equality (Powpaka, 2002). In the long run bribery results in lower private investment (Mauro, 1995), limited economic policy making, increased risk and uncertainty of corporate investment (Søreide, 2009; Wei, 1997) and then slow economic growth and development (Al-Marhubi, 2000; Mauro, 2004).

## *2.2 Top Management Team*

The starting point of my theorization is the literature on top management team. Top management team or TMT is a team of individuals who are accountable for direction of firms, strategy development and implementation for the whole firm (Cyert & March, 1963). Research on TMT examine the dominant composition of individuals within firms who have control power to set direction, identify key opportunities and threats, interpret information, consider firm core competencies and constraints, make decisions and develop and carry out

changes in strategy (Higgins & Gulati, 2006; Reuber & Fischer, 1997; Wiersema & Bantel, 1992). However, the main stream is still that firms are a reflection of their top management team members and that these members' characteristics may have much more influence on a firm's strategy and performance than the chief executive officer (CEO) (Hambrick et al., 1996; Hambrick & Mason, 1984). Gathering attention to the characteristics of TMT, researchers have extended on how firms can further enhance their competitiveness and predict the outcomes of firm performance.

In this paper, I focus on upper echelons theory, seminal work of Hambrick and Mason (1984) which defines how the demographics influence the decision making of TMT. In addition, the studies of upper echelons are focused on the whole TMT. Researchers have extended on this perspective whether demographic characteristics of TMT and firm performance are associated or not (Bantel & Jackson, 1989; Hambrick et al., 1996; Tihanyi, Ellstrand, Daily, & Dalton, 2000; Wiersema & Bantel, 1992). Demographic characteristics are assumed outcomes of individual's quality (Hambrick & Mason, 1984). Therefore, many studies have used demographic characteristics to predict the outcomes. The advantages of demographic characteristics further include that demography can explain underlying mental process such as attitudes toward risk decision or firm performance. For example, Wiersema and Bantel (1992) found that TMT members who are younger, shorter in tenure, higher team tenure, higher educated-level, higher specialization heterogeneity and academic training are more likely to prefer strategic change. However, heterogeneity in TMT could lead to firm's competitive advantage (Abdullah, 2014; Lückerrath-Rovers, 2013). For example, Hambrick et al. (1996) argue that in some industry such as airline, it would be better to require heterogeneity in TMT in terms of functional background, education, and company tenure. Some studies have shown that TMT heterogeneity deters firm action and responses which may effect on competitive moves (Hambrick et al., 1996). Consequently, some researchers found that heterogeneity among TMT to be associated with lowered growth and less competitiveness (Ancona & Caldwell, 1992; Murray, 1989). On the other hand, Wagner, Pfeffer, and O'Reilly III (1984) found that heterogeneity among TMT to be associated with higher turnover among TMT, lower levels of innovation and less strategic change. Murray (1989) argues that team heterogeneity may lower performance in stable environments because of efficiency losses. In short term, TMT with different backgrounds with different values may introduce different values. As a consequent, there would be likely to increase misunderstanding and mistrust and to reduce such conflict, it needs time. All in all, the results have been inconclusive.

Pfeffer (1983) found that demographic of TMT is referred to "the compositions of basic attributes such as age, gender, education level, length of service or residence, race and so forth of the social entity under study." The advantages for using demography are parsimony, comprehensive, logic, testable, and predictive power. Daboub et al. (1995) argue that upper echelons perspectives emphasize on age, tenure in organization, functional background, education level and socioeconomic roots. D'Aveni (1990) found that prestige TMT from elite education background, political elites and broad social networks may get some flexibility from creditors when their firms are in poor condition. Daboub et al. (1995) suggested that TMT characteristics and corporate illegal behavior are associated. This is because TMT is responsible for the outcomes of corporate strategy. When corporate illegal behavior occurs, it is likely that corporate illegal behavior has an impact on upper echelon characteristics, strategy and performance. However, surprisingly, there seem to be no studies related TMT characteristics and bribery practices yet.

J. D. Collins et al. (2009) found that TMT who have social networks with government officials tends to engage in corruption practice. Nonetheless, there has been no attention to the association between TMT backgrounds and firms engaging in bribery practices. To fill the gap, I draw upon upper echelons theory and research on bribery practices to investigate how TMT backgrounds impact on firms engaging in bribery practices differently.

### 3. Propositions Development

In this section, I propose whether TMT backgrounds have impact on firm engaging in bribery practices. Previous research has found the association between TMT and related factors such as gender, age, functional experience and ex-government official differently. In the following, I consider four demographic variables. Prior research has shown that these variables are considered indicators of attitudes about bribery practices. Figure 1 shows TMT characteristics either weaken or strengthen the antecedent factor-bribery practice relationship.

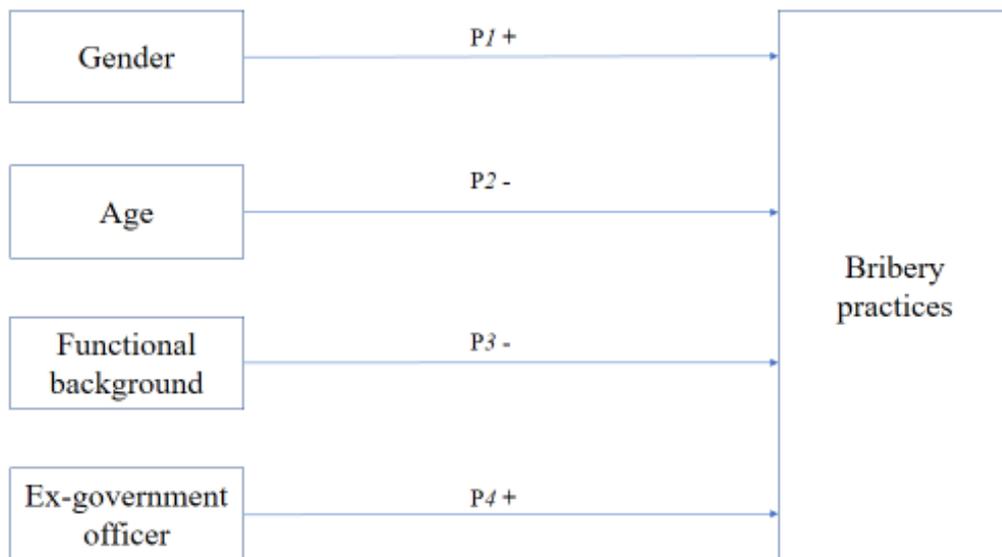


Figure 1: Conceptual Model

#### 3.1 Gender

Gender differences in terms of decision-making can be either enhancing novel ideas or increasing conflict due to the fact that female and male tend to have different leadership style (Alazzani, Hassanein, & Aljanadi, 2017) and dissimilarities on biological nature and social roles (Tuliao, Tuliao, Chen, & Chen, 2017). For example, female are more participative decision making (Bear, Rahman, & Post, 2010; Konrad, Kramer, & Erkut, 2008) and more trustworthy (Shaub & Lawrence, 1996). This may be because female are more inherently to keep relationship-oriented and care for other people (Jaffee & Hyde, 2000; Swamy, Knack, Lee, & Azfar, 2001). Conversely, male are more aggressive and dominant (Konrad et al., 2008). Male TMT is likely risk taking and tend to move forward excessively (Jeong & Harrison, 2017). For ethical issue, Kidwell, Stevens, and Bethke (1987) found that female are more likely to admit mistakes under a decision-making process. In accordance with Landry, Bernardi, and Bosco (2016), it is found that the firms with high percentage of women TMT is more likely to be on the lists of the most admired companies, the best company to work for, the most ethical companies, and the best corporate citizens.

The gender differences play an important role toward ethical dilemma including bribery practices. Valentine and Rittenburg (2007) found that female executives have higher ethical standards than male ones. This is because on average female have a higher level of principle-based reasoning whereas male use a lower level of moral reasoning (Shaub & Lawrence, 1996). Further, female are quicker at picking up on deception due to their ability to recognize unethical dilemma (Johnson & Learned, 2004). As a consequence, female are more compliant with laws and regulations, risk-averse and less tolerant to bribery practices (Tuliao et al., 2017).

Following these statements, this paper argues that male TMT are more likely to engage in bribery practice. The reason is that male TMT, most likely, because of aggression, dominance and ethical dilemma, will have a greater engagement in bribery practice in order to achieve better performance. In contrast, female TMT tends to take into consideration relationships and think about well-being of other people. The discussion leads to the following proposition regarding gender differences:

**Proposition 1:** Firms with more on male TMT are more likely to engage in bribery than firms with more on female TMT.

### *3.2 Average Age*

It is expected that age is associated with decision-making and choices. Wiersema and Bantel (1992) found that top management team with younger endure strategy change. In accordance with Bantel and Jackson (1989), it is found that younger TMT are more likely to be risk-taker. In contrast, older TMT may be likely to be limited by liabilities of sameness which refuse to adapt new ideas because they are risk-averse. They tend to avoid risky decision about future change of firm (Wiersema & Bantel, 1992). Moreover, older TMT tends to commit to the status quo because they experienced the history of industry development. They may seek for wealth and emphasize on career and financial security. Normally, wealth is assumed the measurement of success and human worth (Hofstede, Van Deusen, Mueller, & Charles, 2002).

Further, it is likely to that older TMT might increase networks instead of either challenging formal regulations or making decisions carefully. With growing age comes, the more TMT might focus on developing more networks which are idiosyncratic. C. J. Collins and Clark (2003) found that TMT relies on information from external sources or social networks. TMT utilize information gathering to provide advantages to firms from their social networks. Such networks are created through firm-specific and eventually can lead to sustainable competitive advantage (C. J. Collins & Clark, 2003). To sum up, older TMT has tendency to value information more precisely.

Moreover, older TMT is more likely to behave towards formal regulations or ethical standards that are legitimate. Failure to meet legitimacy, older TMT may leave business. It is found that growing age is related to ethical standards (Kim & Choi, 2003). It may be likely that older TMT tends to spend longer time in decision-making and reconsider things. They are to make sure that the consequences of decision-making are legitimate and ethics.

Following these assertions, this paper argues that older TMT are less likely to engage in bribery practices. Specifically, older TMT tend to seek more wealth, emphasize on career and financial security, value information precisely, and spend longer time to make decisions and reconsider them. These would amplify the average age of TMT on bribery practices:

**Proposition 2:** Firms with older TMT are more likely to engage in bribery than firms with younger TMT.

### *3.3 Functional Experience*

Knowledge is a crucial asset of firm that leads to firm survival and growth (Kogut & Zander, 1992; Kor, 2003). In particular, TMT with accumulated knowledge and experiences can be benefits in many ways such as bringing opportunities in competitive conditions and regulations in the environment, and developing a good reputation and connection with suppliers and customers (Singh, Gaur, & Schmid, 2010). It is found that the higher level of industry-oriented human capital and social capital among upper echelon represents increasing ability rate of firm survival (Pennings, Lee, & Van Witteloostuijn, 1998). How and what TMT express their capability and expertise is fundamentally framed by their functional experience (Bermiss & Murmann, 2015; Waller, Huber, & Glick, 1995). TMT whose functional experience in marketing and R&D has a tendency to emphasize growth, innovation, related diversification, advertising and forward integration and have a high level of capability in leading firm to profitability in turbulent environments. In contrast, TMT whose functional background is in production, engineering and accounting will have a higher capability in leading firm in its automation and backward integration initiatives and will have a higher capability in leading firms to profitability in stable environments. However, Hambrick and D'Aveni (1992) argue that firms whose top management lack expertise in domains are more likely to struck in the middle with inability to solve difficulties.

Different functional experience may bring about bribery practices differently. For example, Daboub et al. (1995) found that the more specific fields such as engineering, accounting causes more ethical behavior than areas such as marketing and finance. It is likely that specific functional experience behave more ethical. Following these assertions, this study argues that the more TMT has specific functional experience, the less TMT engage in bribery practices. I therefore suggest that:

**Proposition 3:** Firms with TMT more functional background are less likely to engage in bribery than firms with TMT less functional background.

### *3.4 Ex-Government Official*

Prior research found that firms may reduce uncertainty from external by appointing ex-government officials sitting on their boards (Hillman, 2005). Ex-government officials could be defined at least one position of team management used to work as a former member of parliament, a minister or any other top politician or party (Chizema, Liu, Lu, & Gao, 2015; Faccio, 2006). Although they may have non-management background (Peng, 2004), they may compromise in decision making between firm and government officers. Ex-government officials certainly have connection with current government officials. Moreover, firms with ex-government officials as TMT may play an important role to help firms gain preferential treatments such as providing information, wining public contracts, relaxing regulation or rules. Such preferential treatments help firms survive (Zheng, Singh, & Mitchell, 2015). It also enhances legitimacy concurrently. Having ex-government officials as TMT can bring legitimacy to firms. Legitimacy help firms get resources, reduce threats and operate business. If firms cannot maintain legitimacy, they consequently cannot survive in that environment. In general, it is more likely that firm itself perceive benefits from having ex-government officials sitting as TMT.

Lee and Weng (2013) found that firms connecting and having close relationship with government officials are more likely to bribe and receive better preferential treatment (Khwaja & Mian, 2005). Having ex-government officials serve as TMT, bribing firms might be allowed to get confidential information. Such information help firms to survive and grow. On the other hand, it is perceived that bribing firms gain legitimacy as well but finally bribing firms may be fallen into advocacy trap (Zuzul & Edmondson, 2017). Further, if bribing firms have ex-government officials as TMT, it is implied that bribing firms may operate business and seize market opportunities faster. Then, bribing firms may gain competitive advantage as a fast mover. The more bribing firms have ex-government officials as TMT, the faster bribing firms get confidential information in order to operate business faster.

It is likely that the bribing firms having ex-government officials served as TMT may gain legitimacy and acquire confidential information in order to operate business and seize market opportunities. As a consequence, I suggest that:

**Proposition 4:** Firms with a greater number of ex-government official backgrounds are more likely to engage in bribery.

## **4. Methodology**

### *4.1 Sample and Data Collection*

In this paper, I examine the influence of top management team on bribery practices. The target population for this paper is top management teams. The unit of analysis is firm level. Thai TMT are primarily selected as key informants for two reasons (Powpaka, 2002). Firstly, Thailand does not have a strong law and regulations to prosecute bribe suppliers. Secondly, bribery in form of gift-giving or entertainment is widespread in common business practices. I will use a combination of survey and archival data in constructing measures of my independent variables. In gathering questionnaire information, I will select two key informants from each listed firms in various industries and conduct semi constructed interview. The reason for two key informants is to check inter rater reliability (J. D. Collins et al., 2009) and reduce bias. Such reliability is to increase overall confidence in research's accuracy. Further the scale must have acceptable psychometric property. To increase response rate, I will draw lots for gold. After that I will check for the outcomes. If the survey is valid across nations, I will conduct more samples in order to compare and contrast across cultures. The countries that I plan to conduct survey are Thailand, Japan, the United States, Britain, India, Italy, Spain and China.

### *4.2 Dependent Measure*

#### *4.2.1 Bribery Practices*

My dependent variable is bribery practices. The survey is conducted to indicate how likely a firm engages in bribery practice. Previous research (Martin et al., 2007; Spencer & Gomez, 2011; Uhlenbruck, Rodriguez, Doh, & Eden, 2006; J. Q. Zhou & Peng, 2012) has provided validation for the bribery measure from the World Business Environment Survey (WBES) by the World Bank. However, I adopt from World Bank's measurement and Gao (2011) to get more perspective.

### *4.3 Independent Measures*

#### *4.3.1 Gender*

The independent of this paper is the top management team's gender. It is dummy code (male = 1, female = 0). Prior research (Tuliao et al., 2017) show that gender matter.

#### *4.3.2 Age*

I use average age of the top management team for each firm at the beginning of the year.

#### *4.3.3 Functional Experience*

In line with Carpenter and Fredrickson (2001), I measure functional experience with following items: 1 = production-operations, 2 = R&D and engineering, 3= accounting and finance, 4 = management and administration, 5 = marketing and sales, 6 = law, 7 = personnel and labor relations, 8 = others. I count on the number of different functional areas that TMT had experience in.

#### *4.3.4 Ex-Governmental Officer*

The scale is dichotomous on whether TMT used to work as a government officer. I will code as 1 = ex-government officer, 0 = others.

### *4.4 Control Variables*

Three variables will be included as control variables because of their potential influence on bribery practices. First, I control the industry sector. Previous research (Brouthers, Gao, & McNicol, 2008; de Jong et al., 2012; Martin et al., 2007; Spencer & Gomez, 2011) posit that industry has a significant impact on corruption. According to OECD (2014), almost two-thirds of bribery practices is gathered in four sectors such as extractive, construction, transportation and storage, information and communication. Second, TMT tenure is controlled. TMT tenure is measured by the how long individuals who belong to the group of TMT. Third, management style characteristics are controlled. Management style characteristics compose of dominant leadership style, desired leadership style, decision-making procedures (Glunk, Heijltjes, & Olie, 2001).

## **5. Expected Results**

The notion that top management team characteristic influence ethical issues is a popular one. As a departure from previous research investigating TMT demographic and firm performance, I provide a theoretically integrated picture of how TMT demographic characteristics impact on bribery practices. My argument is that TMT characteristics, namely gender, average age, functional background, ex-government officials, promotes a willingness a firm to engage in bribery practices differently. The expected results are as following. First, male TMT are more likely to engage in bribery practice. The reason is that male TMT, most likely, because of aggression, dominance and ethical dilemma, will have a greater engagement in bribery practice in order to achieve better performance. In contrast, female TMT tends to take into consideration relationships and think about well-being of other people. Second, older TMT are less likely to engage in bribery practices. Specifically, older TMT tend to seek more wealth, emphasize on career and financial security, value information precisely, and spend longer time to make decisions and reconsider them. Third, it is likely

that specific functional experience behave more ethical. Following these assertions, this study argues that the more TMT has specific functional experience, the less TMT engage in bribery practices. Fourth, the likelihood of bribing firms having ex-government officials served as TMT may gain legitimacy and acquire confidential information in order to operate business and seize market opportunities. The more bribing firms have ex-government officials as TMT, the faster bribing firms get confidential information in order to operate business faster.

## 6. Suggestion for Future Research

It might be fruitful for future research to extend into cultural framework. Culture is collective mental programming which is assumed that members of a group share similar characteristics (Hofstede, 1983). Several studies applied for Hofstede's measure of cultural dimension to perceive corruption in different countries (Baughn, Bodie, Buchanan, & Bixby, 2010; Husted, 1999; Park, 2003). Moreover, TMT in different cultures may have different values which effects on management style characteristics. On the other hand, extant research may be conducted to compare across time difference such as prosperous economies and depressed economies.

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# THE EFFECT OF DEMAND UNCERTAINTY AND TMT DIVERSITY TOWARDS MARKET ENTRY DECISIONS

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## **Abstract**

This study investigates how demand uncertainty impacts on managers' decisions to pursue market entry. Specifically, this study develops proposition that there will be a U-shaped effect of demand uncertainty on managerial decisions to pursue market entry. In addition, this study further posits that that top management team diversity in age and organizational tenure will attenuate the impact of demand uncertainty on managers' decisions to pursue market entry.

**Keywords:** *Real Options, Demand Uncertainty, TMT Diversity.*

# HIGH PERFORMANCE WORK SYSTEM AND ORGANIZATIONAL PERFORMANCE AMONG SMES IN THE SOUTH OF THAILAND: EXAMINING THE ROLE OF CEO LEADERSHIP AND MEDIATING MECHANISMS

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## **Abstract**

The present study examines the relationship between High Performance Work Systems (HPWS) and organizational performance within the context of small and medium-sized enterprises (SMEs) in the southern region of Thailand. It also seeks to examine the antecedent role of CEO leadership and the mediating roles of empowerment and customer service behaviors. The data collected from 330 employees in 44 SMEs in Songkla reveal that 'benevolent' leadership is positively related with HPWS. Furthermore, the influence of HPWS on organizational performance is fully mediated by employee perceptions of empowerment and customer service behaviors. These findings suggest that benevolent leaders are more likely to adopt HPWS within their firms which, in turn, result in higher levels of empowerment, customer service behaviors and ultimately organizational performance. Implications are discussed.

**Keywords:** *High Performance Work System (HPWS); CEO Benevolence; Empowerment; Customer Service Behaviour; Organizational Performance*

## **1. Introduction**

The development of *SMEs* is one of the most viable *strategies* for *achieving national development goals* (Bendickson, Muldoon, Ligouri, & Midgett, 2017). In order for SMEs to participate competitively in the world market, they need to attract, develop and retain skilled employees (Chrisman, Chua, & Litz, 2003; Mitchell, Morse, & Sharma, 2003; Sieger, Bernhard, & Frey, 2011). The present study thus highlights the importance of 'High Performance Work Systems' or 'HPWS', which refers to a bundle of interrelated human resource management (HRM) practices designed to enhance employee skills, motivation and opportunity for development (Bowen & Ostroff, 2004; Huselid, 1995). HPWS generally include specific HRM practices such as recruitment and selection, training and development, compensation and performance appraisal that are both internally and externally aligned.

In the past two decades, research has shown that HPWS has a significant impact on employee well-being and firms' performance (Becker & Gerhart, 1996; Becker & Huselid, 1998; Way, 2002). Research also reveals that HPWS plays a vital role in increasing SMEs' performance (De Winne & Sels, 2010; Torre & Solari, 2013; Tansky & Heneman, 2003). Specifically, it has been indicated that SMEs that adopt HPWS will grow more innovatively, have higher rates of success, are more likely to survive the business environment, and have more capabilities than those that do not implement it (Bendickson et al., 2017).

Unfortunately, to date, the study of HPWS in Thailand is still limited. Additionally, although past HRM research in Thailand has been conducted on large organizations such as universities (Pongpearchan, 2016), hospitals (Ruanggoon, 2016), hotels (Limpitkranon,

2017), telecommunications firms (Koednok & Sungsanit, 2016) and subsidiaries of multinational corporations (Yalabik, CHEN, Lawler, & Kim, 2008), much less attention has been paid to firms in the SME sector. Thus, a primary objective of this present study is to examine the role of HPWS within the contexts of Thai SMEs.

*Furthermore, this study aims to shed light on the role of CEO leadership in the adoption of HPWS. Although it has been acknowledged that CEOs play a vital role in promoting organizational performance (Hambrick, 2007; Hambrick & Finkelstein, 1987; Hambrick & Mason, 1984), little research has been done to examine the influence of CEOs on the adoption of HPWS practices (Maak, Pless, & Voegtlin, 2016). To address this gap, the present study examines the role of ‘benevolent’ leadership, which we believe is highly relevant in the Asian cultures (Cheng, Chou, Wu, Huang, & Farh, 2004; McDonald, 2012; Zhang, Huai, & Xie, 2015). Specifically, benevolent leadership, referred to hereafter as ‘CEO benevolence,’ involves engaging in individualized care and concern for subordinates’ well-being (e.g. Chan & Mak, 2012; Chen et al., 2011; Cheng et al., 2004; Niu et al., 2009; Wang & Cheng, 2010). Past research indicates that benevolent leadership can bring positive changes to both the organization (Farh & Cheng, 2000; Lu, Li, Leung, Savani, & Morris, 2018; Pellegrini & Scandura, 2008) and employees (Chan & Mak, 2012; Chen, Eberly, Chiang, Farh, & Cheng, 2014; Wang & Cheng, 2010). Given a close proximity between leaders and employees in small firms, we argue that this type of leadership styles will play an even stronger role in determining SMEs’ success (Schwenk & Shrader, 1993).*

Furthermore, although the underlying mechanisms through which HPWS influences organizational performance have been both theoretically and empirically established in the strategic HRM literature (Aryee, Walumbwa, Seidu, & Otaye, 2012; Combs, Liu, Hall, & Ketchen, 2006; Guest, Paauwe, & Wright, 2012; Jensen, Patel, & Messersmith, 2013; Liao, Toya, Lepak, & Hong, 2009), researchers have indicated that the relationship between HPWS and organizational performance remains a “black box”, which deserves further attention from scholars (Becker & Huselid, 2006; Bendickson et al., 2017; Heffernan & Dundon, 2016). Specifically, this present study investigates the mediating role of employee intrinsic motivation captured in the concept of empowerment, which involves perceptions of job meaningfulness, competence, autonomy, and impact (Spreitzer, 1995). Furthermore, we propose that HPWS will influence firms’ performance through an improvement in customer service behaviors (CSB) (Bettencourt & Brown, 1997; Podsakoff, Ahearne, & MacKenzie, 1997; Potipiroon, Srisuthisa-ard, & Faerman, 2018). Thus, we argue that the influence of HPWS on firm performance could be explained by the extent to which employees feel empowered and are willing to go above and beyond the call of duty to meet customers’ needs. We are not aware of any study that has examined the sequential mediating roles of these important variables.

Overall, our study contributes to the existing knowledge on the relationship between HPWS and organizational performance by considering the role of CEO benevolence and the mediating roles of employee empowerment and CSB. In so doing, this study helps identify a new pathway through which HPWS inspires organizational performance. In the sections that follow, we discuss the literatures on the relationship between HPWS and organizational performance, the roles of CEO leadership, empowerment and customer service behavior.

## 2. Literature Review and Hypotheses

### 2.1 High Performance Work System (HPWS) and Organizational Performance

Over the past two decades, HRM research have moved beyond traditional HRM practices and begun to examine a bundle of various HRM practices, which generally include but are not limited to recruitment and selection, participation in decision-making, training and development, communication, compensation, performance appraisal, career development and promotion, self-management teams. These practices are most effective when they are internally and externally aligned. *Internal alignment*, also known as horizontal fit suggests that HRM practices complement and are aligned with each other, whereas *external alignment*, also known as vertical fit, indicates that work system is aligned with the organization's strategy. When bundled together, these HRM practices create synergies that help to deploy the value of human capital.

As HPWS involves an investment in people, employee empowerment, good communication systems, performance management, fairness in setting pay and benefits, job security and a focus on low status differentials (Demirbag, Collings, Tatoglu, Mellahi, & Wood, 2014), it has been indicated that employees in firms with higher levels of HPWS tend to show greater job satisfaction, enhanced organizational commitment, lower employee turnover, and higher productivity (Becker, Huselid, Pickus, & Spratt, 1997).

Although several scholars have questioned the extent to which HPWS actually exists in small businesses as they may not have the resources to possess HPWS or that HPWS may not be even be needed in these organizations (Bendickson et al., 2017), several other scholars indicate that successful SMEs tend to have higher levels of HPWS (Ait Razouk, 2011; Bae, Chen, David Wan, Lawler, & Walumbwa, 2003; Bendickson et al., 2017; Cardon & Stevens, 2004; Cassell, Nadin, Gray, & Clegg, 2002; De Grip & Sieben, 2009; De Kok & Uhlaner, 2001; Della Torre & Solari, 2013; Gilman & Raby, 2013; Brian Harney & Dundon, 2006; Kotey & Slade, 2005; Kroon et al., 2013; Pittino, Visintin, Lenger, & Sternad, 2016).

### 2.2 CEO Benevolence and HPWS

Within the contexts of SMEs, we argue that CEOs own the task of adopting and putting HR practices into practice to influence the attitudes and behaviors of employees within their firms. Thus, our aim is to address the influence of a CEO's leadership style on the adoption of and implementation of HPWS. Broadly speaking, the leadership literature has focused on two primary types of leadership behaviors, namely task-oriented and relationship-oriented leadership behaviors (Bass, 1990; Yukl, 2012; Yukl, Gordon, & Taber, 2002). Task-oriented leadership behaviors involved structuring the roles of followers or subordinates, providing direction and instruction, using power, and behaving in ways to motivate and build an effective team to achieve organizational goals and objectives, whereas relations-oriented leadership behaviors include showing concern for the feelings of employees, treating subordinates with respect, caring about followers' well-being and providing support.

Our emphasis is on the importance of benevolent leadership style—an important component of relation-oriented leadership behaviors. We focus on this specific type of leadership styles because this form of leadership tends to be pervasive in Asian cultures. Specifically, research has shown that CEOs' benevolent behaviors, such as showing concern and care for employees, treating employees with respect, caring about employees' welfare, and providing

support, are viewed as motivators (Hart & Quinn, 1993) that lead to positive attitudes of employees towards organizations (Wang et al., 2011; Xi, Zhao, & Xu, 2016).

Benevolent leadership style is also one of three main *elements of paternalistic leadership* (i.e., morale integrity, benevolence and authority) (Chan & Mak, 2012; Chen et al., 2014; Farh & Cheng, 2000), which involves displaying holistic caring behaviors, individualized care and concern for subordinates' well-being (e.g. Chan & Mak, 2012; Chen et al., 2011; Cheng et al., 2004; Niu et al., 2009; Wang & Cheng, 2010). Arguably, this is similar to a father-and-son relationship in which a father treats the son with care and kindness and vice versa. Thus, it could be said that benevolent leaders are those who treat their employees like family members by displaying generosity and concern for their well-being.

Drawing from the Upper Echelon Theory (UET) (Hambrick, 2007; Hambrick & Mason, 1984), we propose that CEOs' benevolent leadership will influence the extent to which HPWS is adopted. The UET posits that CEOs' characteristics including sex, age, educational background, work experience, value orientation and leadership styles can significantly influence how they make strategic decisions and guide their business. Indeed, in early stages of a firm's life cycle, firm owners generally play a crucial role in implementing organizational policies and strategies. Accordingly, we argue that CEOs who (are perceived to) embody benevolent values are more likely to adopt HRM practices that aim to help employees grow and succeed in their work roles. A recent study by Kroon, Van De Voorde and Timmers (2013) showed that in small firms where the owners have high trust and awareness in the value of HPWS and have a deeper understanding in HRM practices, employees tend to perceive a greater presence of opportunity practices. Thus, we expect that CEOs' managerial styles will relate significantly with the choice of HPWS and propose that;

***Hypothesis 1: CEO benevolence is positively related to HPWS.***

***Hypothesis 2: CEO benevolence is positively related to organizational performance via HPWS***

### *2.3 The Role of Empowerment*

As an alternative intervening mechanism linking HPWS and firms' performance, we further propose that individuals' motivation captured in the concept of *empowerment* can be enhanced and cultivated through HPWS. Empowerment refers to employees' belief in their potential to be successful in their jobs (Spreitzer, 1995). The process of the psychological empowerment occurs through four cognitions including meaning, competence, autonomy or self-determination, and impact (Spreitzer, 1995). *Meaning* refers to the extent to which employees feel that their work is meaningful. *Competence* can be thought of as self-efficacy whereby the employee trusts that they can undertake their work role. *Impact* refers to the extent to which an individual perceives that they can have a positive impact on their immediate work environment. Finally, *autonomy* refers to the extent to which employees feel that they can independently perform their work without people watching over their shoulders.

Accordingly, we argue that the adoption of HPWS will help enhance employee empowerment. For example, training opportunities can enhance employees' sense of self-efficacy by providing them with necessary job skills. Self-managed teams also likely foster feelings that one is independent and autonomous in his/her work roles. Notably, Aryee et al. (2012) showed that HPWS and empowerment climate partially mediated the impact on firm-level HPWS on firm-level psychological empowerment. A recent meta-analysis by

Chamberlin, Newton, and LePine (2018) also confirmed that empowerment serves as a mediating mechanism between HPWS and positive organizational outcomes. Based on previous research, the present study hypothesizes that:

***Hypothesis 3: HPWS is a positively related to empowerment***

#### *2.4 The Role of Customer Service Behavior*

Next, we propose the relationship between HPWS and organizational performance could be explained by customer service behavior (CSB), which is defined as the extent to which employees strive to meet the highest service performances directed toward customers, including proactively assisting customers who need help, treating customers with courtesy, respect, and politeness and showing friendliness and warmth to them (Bettencourt & Brown, 1997; Podsakoff, Ahearne, & MacKenzie, 1997; Potipiroon, Srisuthisa-ard, & Faerman, 2018).

Integrating this hypothesis with the concept of empowerment discussed above, we propose that HPWS could generate superior customer services by enhancing employees' perceptions of competence, meaningfulness, autonomy and impact. Specifically, through selective staffing, employees will perceive that they are well suited to their tasks and thus are more likely to efficiently perform their respective duties (Locke, 1976; Macky & Boxall, 2007). Proper delegation of decision-making power responsibility may also increase employees' faith in their ability to providing a service to customers. In addition, allowing employees to decide how to handle customer complaints can enhance their perceived self-determination and job impact (Liao et al., 2009). More importantly, proper training programs will help equip front-line employees with necessary competencies for delivering high-quality customer service. Additionally, other practices (e.g., continuous performance feedback and communication process) may help employees perceive the service roles to be critical and significant. Through this performance management process, we expect that employee actions are also more likely to be better aligned with business directions.

Taken together, we propose that the influence of CEO benevolence on organizational performance will be sequentially mediated by HPWS, empowerment and customer service behavior. That is, we argue that CEOs who are more benevolent will be more likely to adopt HPWS within their firms which, in turn, result in higher levels of empowerment, customer service behaviors and ultimately organizational performance. Thus, this study hypothesizes that:

***Hypothesis 4: CEO benevolence is positively related to organizational performance via HPWS, empowerment and customer service behavior.***

### **3. Methodology**

#### *3.1 Sample and Data Collection*

Our data were collected from a sample of front-line SME employees in Songkla Province. We were able to obtain the names and contact information of all SMEs from a database operated by the Office of SMEs Promotion. We randomly selected a sample of 50 SMEs located in Hat Yai District because it is a major business hub in the southern region of Thailand. In order to ensure high response rates, we decided to hand-distribute the surveys to the respondents in these 50 SMEs (10 survey questionnaires each). In so doing, we also asked

for the permission from the HR manager (or managing director) so that the survey questionnaires could be distributed directly to the respondents. Before distributing the survey, we informed the respondents about the nature of research we were conducting.

The employee respondents were asked to fill out the basic information about them and also to assess their CEOs' leadership styles and organizational performance as well as to assess their own empowerment and customer service behavior. Upon completing the survey, each respondent was asked to return the survey directly to the researcher. Out of the 500 surveys distributed to 50 SMEs, 330 from 44 SMEs were returned, resulting in a 66% response rate.

### 3.2 Measurements

*CEO benevolence* was measured using the 4-item CEO benevolent leadership scale developed by Wang et al. (2011). *HPWS* was measured using eight HRM practices, consisting of recruitment and selection, training and development, compensation, performance appraisal, self management teams or team work, communication, participation in decision-making, and career development and promotion. The measurement items were drawn from a number of previous studies. *Empowerment* was assessed using Spreitzer's (1995) 12-item scale comprising four dimensions: autonomy, competence, impact and meaning. Customer Service Behavior (CSB) was measured using an established 5-item scale developed by Bettencourt and Brown (1997). These questions were measured based on a 5-point Likert-scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Finally, *organizational performance* was measured using the instrument developed by Tan and Litsschert (1994). The respondents were asked on a five-point scale to rate the organizational performance of their SMEs, ranging from 1 (*bottom 20 %*) to 5 (*top 20 %*).

### 3.3 Data Analysis

All the analyses that followed were conducted using Structural Equation Modeling (SEM) with Mplus Version 7.2 (Muthén & Muthén, 1998-2012). SEM is a multivariate statistical approach that allows researchers to concurrently examine both the measurement and structural components of a theoretical model. Our approach is based on a two-step procedure recommended by Anderson and Gerbing (1988). First, we examined the validity and reliability of the study variables via confirmatory factor analysis (CFA). Note that measures with more than 5 items (e.g., HPWS and empowerment) are combined into composite scores through parcelling techniques. Second, we tested our hypotheses by examining the structural model. Several indices were used to assess the model fits, including the overall model's chi-square, the comparative fit index (CFI), the Tucker-Lewis Index (TLI), and the root mean square error of approximation (RMSEA). To indicate a good fit, CFI and TLI should be above 0.90 (Hu & Bentler, 1999); and RMSEA should be between 0.05 and 0.08 (MacCallum, Browne, & Sugawara, 1996). Because the data in the current study had a nested data structure (i.e., employees nested in SMEs), we used TYPE = COMPLEX option in Mplus to adjust standard errors for the effects of clustered data (Muthén & Muthén, 1998). Tests of sequential mediation involving multiple mediators were also conducted (Preacher & Hayes, 2008). Indirect Effects Were Derived Using A Bootstrapping Method.

## 4. Results

### 4.1 Measurement Model

Prior to hypotheses testing, confirmatory factor analyses (CFAs) were first conducted to evaluate the distinctiveness of the key variables. As shown in Table 1, this model fitted the data well ( $\chi^2 = 429.56$ ,  $df = 265$ ,  $p < .001$ ; CFI = .96; TLI = .96; RMSEA = .043, Model 1) and was significantly better than other models. Consistent with the CFA results, it was found that the bivariate correlations among all the key variables fall within an acceptable range ( $r < .70$ ) (see Table 2). In assessing the convergent validity of the measurement items, we examined the item loadings on their respective constructs (Hulland, 1999; Tenenhaus et al., 2005). All the factor loadings were above the recommended .70 value, ranging from .70 to .93. Furthermore, we found that the average variance extracted (AVE) ranged from .55-.82, which exceeded the recommended value of .50 (Fornell & Larcker, 1981). Composite reliabilities (CR) of constructs also ranged from .83 to .94, exceeding the recommended value of .60 (Bagozzi & Yi, 1988). In addition, Cronbach's alphas showed satisfactory levels of internal consistency, ranging from .82 to .94 (Nunnally, 1978).

### 4.2 Structural Model

As strong support was found for the validity and reliability of the measurement instruments, we proceeded to test the hypothesized structural model in which all paths were estimated. Standardized parameter estimates and explained variance ( $R^2$ ) in all the analyses that follow are displayed in Figure 1.

As shown in Figure 1, seven out of ten paths were significant in the expected directions. Specifically, CEO benevolence had a direct positive relationship with HPWS ( $\beta = .423$ ,  $p < .000$ ) and also empowerment ( $\beta = .17$ ,  $p < .002$ ) but not with CSB ( $\beta = .04$ ,  $ns$ ) or organizational performance ( $\beta = 0.05$ ,  $ns$ ). HPWS also had a positive relationship with empowerment ( $\beta = .36$ ,  $p < .001$ ) and organizational performance ( $\beta = .226$ ,  $p < .035$ ) but not with CSB ( $\beta = .070$ ,  $ns$ ). Empowerment also had a positive relationship with CSB ( $\beta = 0.44$ ,  $p < .000$ ) and organizational performance ( $\beta = 0.29$ ,  $p < .013$ ), whereas CSB also had a positive relationship with organizational performance ( $\beta = 0.23$ ,  $p < .021$ ). These findings provide support for Hypotheses 1 and 3.

We then tested for mediation effects. As shown in Table 4, the result showed that the effect of CEO benevolence on organizational performance through HPWS was statistically significant (.095; 95% CI [.013; .191]). Hypothesis 2 was therefore accepted. In addition, the effect of CEO benevolence on organizational performance via HPWS, empowerment and CSB was statistically significant (.016; 16% CI [.003; .037]). Thus, Hypothesis 5 was supported. Furthermore, as shown in Figure 1, the results revealed that the theoretical model could explain about 42.5% of the variance in HPWS, 40.6 in empowerment, 33.2% in CSB and 25.4% in organizational performance.

## 5. Discussion

This study examines the link between CEOs' benevolent leadership style, HPWS and organizational performance and the mediating roles of empowerment and CSB. Our findings lend support to the arguments that CEO leadership influences the adoption of HPWS in their business and that the relationship between HRM and organizational performance is mediated by employees' attitudes (i.e., empowerment) and behavior (customer service behaviors).

### 5.1 Theoretical Implication

First, our findings provide additional support to the notion that HPWS can be a successful endeavour both in large and small organizations (Becker & Huselid, 2006). Although Bacon and Hoque (2005) explained that the adoption HPWS in SMEs is likely limited to informal practices, Gray and Mabey (2005) argued that those that adopt more formal development practices are more likely to achieve high growth and well-positioned to reap the performance. Furthermore, our findings regarding the sequential mediating roles of empowerment and customer service behaviors enhance our understanding of how HPWS contributes to organizational performance. We are not aware of any study that has examined these psychological mechanisms.

Secondly, to our knowledge, our study is among the first to examine an antecedent role of CEO benevolence in the HPWS-organizational performance relationship. Consistent with the upper echelon perspective, our findings showed that CEOs' benevolent leadership (e.g., showing concern and care for employees, caring about employees' welfare, providing support) could directly influence the adoption of HPWS in their own business (Arthur, Herdman, & Yang, 2016; Kroon et al., 2013). This is consistent with previous research which indicates that relational capital tends to play a particularly strong role in family-owned firms (Pittino et al., 2016). Moreover, we showed that CEOs who show benevolence can improve organizational performance by motivating employees' customer service behavior (Cruz et al., 2010; Dietz, 2004; Song et al., 2014; Wang et al., 2011; Xi et al., 2016). Our study also address Evans, Anderson, and Gilliland's (2018) calls for more research on the role of benevolent leadership on CSB.

### 5.2 Practical Implications

Our research provides useful *implications for policy* related to the development of SMEs. Although Thai SMEs constitute a major source of employment and generate significant domestic and export earnings, they face a number of inherent difficulties in developing their own capacities to meet the demands of the changing business environment. As indicated by the office of SMEs Promotion (2017), owners of family-owned businesses tend to lack leadership and management skills, HRM knowledge and thus are unable to retain skilled employees. Although owners of SMEs utilize their own personal work experiences to start their own businesses, the hard reality is that when their business grows bigger, good management skills of has become indispensable. Thus, it is important for the government to equip SMEs with necessary resources that could be used to meet these inherent challenges. Continuous training (i.e., leadership and HRM practices) could be an effective way to overcome these challenges.

### 5.3 Limitations and Future Research

Despite the findings, certain limitations should be considered. First, because our data was collected from a single source, we cannot completely rule out the potential problem of common method variance (Podsakoff, 2003). We recommend future research to collect data from multiple sources such as CEOs and customers. For example, customer service behavior could be evaluated by the actual customers. Also, we only examined the role of empowerment as an attitudinal pathway through which HPWS influence organizational performance. Thus, the examination of other mediating variables (e.g., social exchange processes) may provide a more comprehensive picture of the above relationship. Finally, the generalizability of our findings could be limited, as our study was conducted only on SMEs

operating in the southern region of Thailand. Future studies should attempt to replicate our findings in other contexts, both in Thailand and outside in order to generalize our findings. Finally, the present study is cross-sectional and it is possible that the views held by SMEs could change over time. Longitudinal design is thus recommended for future research.

## 6. Conclusion

This study advances the knowledge in the HRM literature by highlighting the integral roles of CEO leadership on HPWS. Our model also clarifies how CEO benevolence and HPWS can enhance organizational performance. The results indicate that the relationships between CEO benevolence, HPWS and firm performance are fully mediated by empowerment and customer service behaviors. Firms with higher levels of benevolent CEOs are more likely to adopt and implement HPWS, in turn leading to higher levels of empowerment, customer service behaviors and ultimately organizational performance. We hope that our study will stimulate further research in this important area.

## Appendix

Figure 1: Structural Equation Model

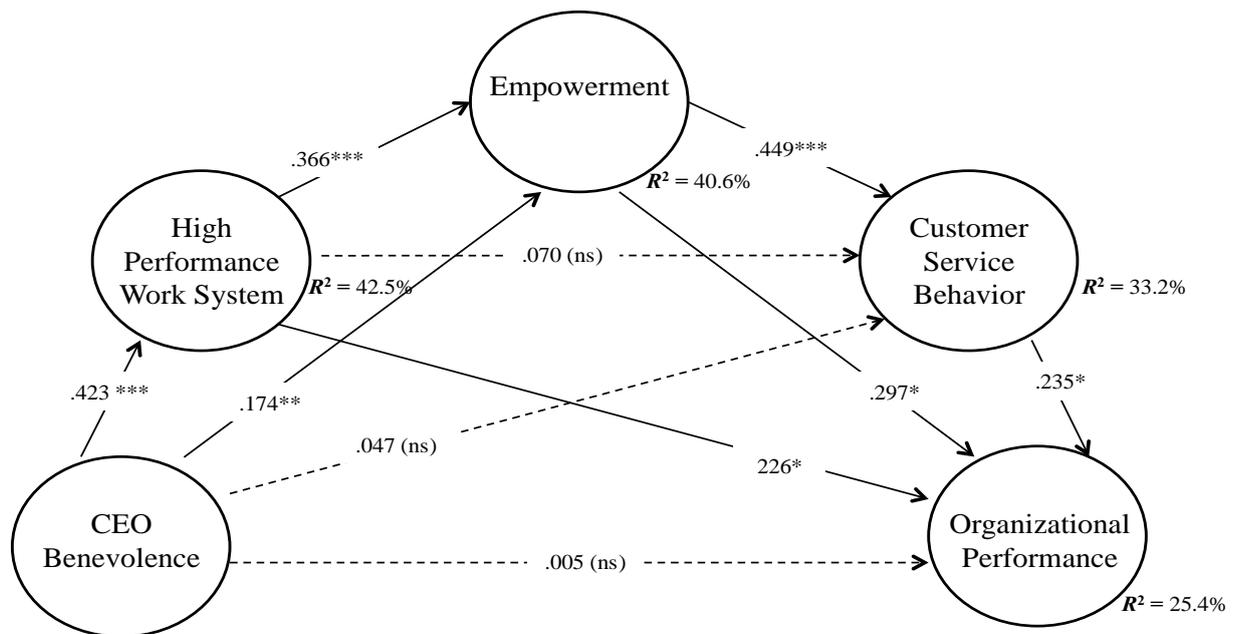


Table 1 Comparison of Measurement Models

Model	$\chi^2$	df	RMSEA	CFI	TLI	SRMR	Model	$\Delta\chi^2/\Delta df$
1. Five-factor	429.56	265	0.04	0.96	0.96	0.03		
2. Four-factor (1)	1133.03	269	0.09	0.81	0.79	0.09	2 vs. 1	703.47/4**

3. Four -factor (2)	697.63	269	0.06	0.90	0.89	0.07	3 vs. 1	268.07/4**
4. Three-factor	1,379.66	272	0.11	0.76	0.73	0.11	4 vs. 1	950.10/7**
5. One-factor	2,621.65	275	0.16	0.49	0.44	0.13	5 vs. 1	2,192.09/10**

**Note.**  $N = 330$ ; \*\*  $p < 0.001$ ; Five-factor (Hypothesized); Four-factor (1) (CSB and organizational performance merged); Four-factor (2) (HPWS and organizational Performance merged); Three-factor (Empowerment, CSB and organizational performance merged); One-factor (All constructs merged)

Table 2 Descriptive Statistics, Correlations, and Reliability Estimates

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. CEO Benevolence	3.88	.81	(.95)				
2. HPWS	3.22	.54	.61**	(.93)			
3. Empowerment	3.77	.59	.50**	.53**	(.83)		
4. CSB	4.00	.58	.37**	.38**	.50**	(.92)	
5. Organizational Performance	3.54	.74	.29**	.37**	.40**	.35**	(.92)

**Note.**  $N = 330$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; Cronbach's alphas reported in parentheses

Table 3 SEM Path Coefficient and its significance

Constructs		Constructs	Estimate	t	p-value
CEO Benevolence	-- >	HPWS	0.423	7.373	0.000***
CEO Benevolence	-- >	Empowerment	0.174	3.170	0.002**
CEO Benevolence	-- >	CSB	0.047	0.924	0.356
CEO Benevolence	-- >	Organizational Performance	0.005	0.081	0.935
HPWS	-- >	Empowerment	0.366	3.253	0.001***
HPWS	-- >	CSB	0.070	0.793	0.428
HPWS	-- >	Organizational Performance	0.226	2.109	0.035*
Empowerment	-- >	CSB	0.449	5.335	0.000***
Empowerment	-- >	Organizational Performance	0.297	2.484	0.013*

CSB	-->	Organizational Performance	0.235	2.306	0.021*
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**Note.**  $N = 330$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ ;

Table 4 Total, Direct, and Indirect Effects

Hypothesized paths	Total	Direct	Indirect	95% Confidence Intervals (CIs)	
CEO -> HPWS -> Organizational Performance			0.095	0.013	0.191
CEO -> HPWS -> Empowerment -> Organizational Performance			0.046	0.010	0.103
CEO -> HPWS -> CSB --> Organizational Performance			0.007	-0.009	0.029
CEO -> HPWS -> Empowerment -> CSB -> Organizational Performance			0.016	0.003	0.037
CEO -> Organizational Performance	0.251	0.005		-0.161	0.171

**Note.**  $N = 330$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ ;

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# HOW MARKET AND NON-MARKET RESOURCES AFFECT EMERGING- ECONOMY FIRMS TO EXPAND INTO ADVANCED ECONOMIES

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## **Abstract**

This study investigates impacts of “market” and “non-market” resources on the international expansion of emerging market firms (EMFs) into advanced economies. We argue that non-market critical resources prevent EMFs from expanding into advanced markets. The differences in the environmental conditions and institutional frameworks between emerging markets and advanced economies make it more difficult for EMFs to transfer their institutional- void advantage to advanced economies, and in turn, encourage firms to improve their current paths and remain in their domestic markets or expand into other developing countries. On the contrary, market critical resources drive EMFs to expand into advanced market. This type of resources allows firms to overcome liability of foreignness and compete effectively in market- oriented economies.

**Keywords:** *Market Resources, Non-Market Resources, Emerging Market Firms; International Expansion.*

## **1. Introduction**

Are emerging-market firms (EMFs) that succeed in the domestic market likely to expand into advanced economies? Or are they more likely to remain complacent in their success and stay focused on their domestic market and expand into similar institutional environment? Despite many previous studies, the answers to the above questions are still controversial.

Successful organizations frequently possess critical resources to compete against other firms in the market (Barney, 1991; Wernerfelt, 1984). Such valuable resources not only define the competitive advantage of the firms, but also enable firms to engage in innovation and risky projects (Schumpeter, 1942), reinforcing their competitive position in the market. These resources allow firms to more readily create, imitate, and appropriate technological innovations. Moreover, these resources can be recombined with other complementary resources to enable organizations to create new capabilities (Eisenhardt & Martin, 2000; Helfat *et al.*, 2009; Teece, Pisano, & Shuen, 1997; Winter, 2003). These sets of resources allow firms to compete effectively in both the domestic and international market (Barney, 1991; Caves, 1971; Dunning, 1980; Dunning & Lundan, 2008; Guillén & García-Canal, 2009; Hymer, 1976; Schumpeter, 1942).

From the contrary perspective, resources that have historically provided organizations with competencies can create competency traps when environmental conditions change (Levinthal & March, 1993). They are subject to structural inertia, which enables firms to enhance their performance by increasing the reliability and accountability of the organizations (Hannan & Freeman, 1989). This relationship clearly manifests in the more historical and successful firms, where age and various experiences protect them from failure (Kelly & Amburgey, 1991). Various advantages protect successful firms from abnormally

poor performance (Barney, 1991; Wernerfelt, 1984), resulting in organizational inertia. (Bromiley, Miller, & Rau, 2001; Levinthal & March, 1993; March, 1991; Vermeulen & Barkema, 2001). Grounding upon the above theoretical debate, this study investigates the impact of various types of critical resources – market and non-market– on an emerging market firm’s international expansion into advanced economies. On one hand, EMFs transfer their critical resources (Cuervo-Cazurra & Genc, 2008; Hoskisson *et al.*, 2000; Khanna & Palepu, 1997; Khanna & Palepu, 2006; Kim, Kandemir, & Cavusgil, 2004; Luo & Tung, 2007; Tan & Meyer, 2010) over competitors to expand into advanced economies. On the other hand, some of these critical resources may have limitation to be transferred into advanced economies. Therefore, resource reconfiguration is needed before EMFs transfer these resources into advanced economies. Nevertheless, Firms tend to preserve their paths in order to sustain their past successes (Cyert & March, 1963; Garud, Kumaraswamy, & Karnøe, 2010; Sydow, Schreyögg, & Koch, 2009). Therefore, resources acquired by firms over time may impose constraints on their strategic options (Sydow *et al.*, 2009). Without reconfiguration, unique sets of critical resources tend to influence the EMFs to remain in the domestic market and to enter into other developing countries. To reconcile the above conflicting views, this paper presents the tension between core capabilities and core rigidities. It examines the relationship between various types of critical resources and their transferability into advanced economies. We categorize critical resources into three types;

### *1.1 Non-Market Critical Resources*

Non-market critical resources are resources that firms develop to respond to an institutional environment of a country. Firms frequently develop this type of resource to fill institutional voids in a country (Khanna & Palepu, 1997; Khanna & Palepu, 2006). This type of resources generally has limitation to transfer (Cuervo-Cazurra, Maloney, & Manrakhan, 2007) into developed institution. EMFs frequently leverage this type of resource to compete successfully in their domestic markets. We argue that non-market critical resources prevent EMFs from expanding into advanced economies. This type of resources loses a lot of its value when transferred. The environmental conditions, institutional frameworks, and rules of the game of emerging markets are different from those in advance-economy market (Hoskisson *et al.*, 2000; Wright *et al.*, 2005), making it difficult for EMFs to transfer their firm-specific advantages into advanced economies. These differences encourage the EMFs to improve their current paths and develop capabilities along existing path trajectories (Sydow *et al.*, 2009; Vermeulen & Barkema, 2001) to remain in their domestic market or expand into similar institutional business environment.

### *1.2 Market Critical Resources*

Market critical resources are resources that firms develop to respond to a country’s market requirement of a country’s environment. Firms can exploit this type of resource in both domestic markets and advance economy market (Govindarajan & Ramamurti, 2011). They are transferable to both developed and developing institutions. We argue that market-based critical resources accelerate firm to expand into both first-world and developing countries. Existing literature heavily investigates this type of resources (Caves, 1971; Dunning, 1980; Dunning & Lundan, 2008; Hymer, 1976) and find strong support that the degree and extent of international expansion are associated with technological capabilities (Khavul *et al.*, 2010), innovation (Lau & Ngo, 2004), management capabilities (Delery & Doty, 1996; Guillén & García-Canal, 2009), brand (Bonaglia, Goldstein, & Mathews, 2007), and operational

efficiency (Elango & Pattnaik, 2007).

This study contributes to the following areas. First, this paper contributes to international business literature. It provides insight into the tension between core competencies and core rigidities. Specifically, it disintegrates types of critical resources that have various levels of difficulty to transfer to advanced economies. Many scholars examine the relationship between critical resources and the international expansion of firms. The empirical results of the existing studies yield mixed results (Belderbos & Sleuwaegen, 2005; Hennart & Park, 1994; Ito & Pucik, 1993; Mitchell, Shaver, & Yeung, 1992). We expect that by categorizing types of resources may help to paint a clearer picture.

Second, this paper contributes to the literature on the international expansion of EMFs. This study investigates the international expansion of EMFs into advanced economies, while the existing literature provides the factors behind the international expansion of EMFs into less developed countries or other emerging markets (Aulakh, 2007; Cuervo-Cazurra & Genc, 2008; Erramilli, Agarwal, & Seong-Soo, 1997; Khanna & Palepu, 2006; Li & Yao, 2010; Luo & Tung, 2007; Wright *et al.*, 2005).

## **2. Theoretical Development & Hypotheses**

### *2.1 Critical Resources and International Expansion*

During the past four decades, researchers have tried to investigate the international expansion of firms via foreign direct investments. Since the seminal work of Hymer (1976), one of the common explanations has centered on the firm-specific advantages that cause international expansion. Among major international business theories, this main stream of research proposes that firms expand abroad through the transfer of firm-specific advantages over competitors in the host market (Caves, 1971; Dunning & Lundan, 2008; Hymer, 1976; Vernon, 1966). In order to exploit competitive superiority, firms overcome liabilities of foreignness (Zaheer, 1995) and transfer their firm-specific advantages to host markets via foreign direct investments (Erramilli *et al.*, 1997). Therefore, critical resources are very important for firms to gain competitive superiority over local firms. Unique critical resources have allowed firms to overcome barriers to internationalization (Peng, 2001; Young, Dimitratos, & Dana, 2003). This stream of research receives extensive empirical support (Guillén & García-Canal, 2009). In addition, organizational theorists view organizational resources as facilitating firms' engagement in risky investments and innovation (Schumpeter, 1942). Resources may provide the necessary flexibility to take these risks (Kraatz & Zajac, 2001). Such resources function as a bundle of options to be utilized for future strategic choices (Bowman & Hurry, 1993). Organizations possess firm-specific resources that can accumulate to develop, produce, and market any given product or service (Penrose, 1959). Furthermore, resources can be recombined with other complementary resources to develop new critical resources (Cohen & Levinthal, 1990). Such recombination result in dynamic capabilities that motivate firms to make business or industry changes or respond to environmental changes (Eisenhardt & Martin, 2000; Helfat *et al.*, 2009; Teece *et al.*, 1997). Therefore, organizations with large pools of valuable resources are in a better position to gain competitive advantage over the competitors. These organizations more readily invent, imitate, or appropriate organizational and technological innovations (Kraatz & Zajac, 2001; Schumpeter, 1942).

Based on the contrary perspective, many scholars assert that organizational resources may

deter firms from expanding abroad. According to Levinthal and March (1993), resources that enabled past success may deter or misdirect the search for behaviors and the organizational learning necessary for adaptation in turbulent environments. Firms tend to focus on applying and improving their existing resources at the expense of exploring and developing the new resources that are often required for strategic change (Bromiley *et al.*, 2001; Kraatz & Zajac, 2001). In other words, firms tend to repeat what they successfully achieved in the past. They tend to engage in changes whenever there is a survival-threatening crisis (Bromiley *et al.*, 2001; Cyert & March, 1963)). Under normal circumstances, firms tend to operate in their path- dependent manner (Nelson & Winter, 1982). Path dependence severely limits the range of responses that firms can employ when confronted by environmental turbulence (Kraatz & Zajac, 2001). Hence, the resources that firms develop into their core competencies can become core rigidities (Leonard-Barton, 1992), preventing them from engaging in international expansion (Autio, 2005) into advanced economies.

According to the above discussion, the debate centers on whether critical resources and success in the domestic market deter or facilitate firms' international expansion into advanced economy markets. In the next section, we theorize that particular types of resources affect an EM firm's global strategy.

## *2.2 Non-Market Critical Resources and the International Expansion of EMFS into Advanced Economies*

Non-market critical resources are resources that a firm developed to respond to an institutional environment. Frequently, EMFs leverage this type of resources to compete successfully in their domestic markets and other developing countries. This type of resources generally has limitation to transfer into developed institution. Both firms from emerging markets and advanced economies can develop similar market-based advantages, but the same cannot be said of their non-market advantages because these are rooted in the home country environment, which differ markedly between advanced and developing countries (Cuervo- Cazorra & Genc, 2008). We argue that non-market critical resources deter EMFs from expanding into advanced economies. EMFs find it difficult to transfer their institution-based advantages (Caves, 1971; Cuervo-Cazorra *et al.*, 2007; Dunning, 1980; Khanna & Palepu, 1997) to countries whose institution is already in a developed state. These non-market critical resources lose their value in the competition in market-based economies (Cuervo-Cazorra & Genc, 2008; Tan & Meyer, 2010) Cuervo-Cazorra & Genc 2008; Tan & Meyer; 2010). We operationalize non-market critical resources by employing government ties.

## *2.3 Government ties as non-market resources*

In emerging economies, many competitive advantages are based on network relationships to substitute for a lack of institutional infrastructure (Cuervo-Cazorra, 2006; Gammeltoft, Barnard, & Madhok, 2010; Hoskisson *et al.*, 2000; Kale & Anand, 2006; Peng, Wang, & Yi, 2008). Unlike the governments of developed countries, the governments in emerging economies normally play an important role in providing critical resources to firms to facilitate their operation in the home market (Gammeltoft *et al.*, 2010; Hoskisson *et al.*, 2000;

Kale & Anand, 2006; Peng *et al.*, 2008). The degree of governmental regulatory restriction significantly affects the performance of EMFs (Kale & Anand, 2006). Significant support and protection from the government may allow EMFs to grow and accumulate the resources required for capabilities development (Kale & Anand, 2006). These advantages, in turn, enable EMFs to dominate the domestic market (Khanna & Palepu, 1997). Frequently, many EMFs become effective monopolies in their home markets (Hoskisson *et al.*, 2000; Kim *et al.*, 2004). Therefore, strengthening their relationship with the government is very critical for EMFs striving to compete effectively in emerging markets but not in advanced economy markets. The governments in advanced economies are normally considered as a support unit to firms' competitiveness (Porter, 1991). They have been assumed away as background. When market works smoothly in developed countries, the market-supporting institutions are almost invisible (Peng *et al.*, 2008).

Although government ties are very important in enabling firms to effectively compete in the home market (Cuervo-Cazurra *et al.*, 2014), these ties may prevent firm from venturing into advanced economies. EM firm find it difficult to transfer this advantage in overseas. As, firms tend to build their capabilities upon their existing routines and paths (Nelson & Winter, 1982), which enables them to form strong ties with the home government., a management team may decide to engage in exploitation to improve their current paths (Vermeulen & Barkema, 2001). By engaging in exploitation, firms may focus on the knowledge and routines that contribute the most to their success and filter out those routines that are less successful in the current setting (Cyert & March, 1963). Because possessing strong ties to the government is an advantage for a firm operating in an emerging market (Cuervo-Cazurra, 2006; Gammeltoft *et al.*, 2010; Hoskisson *et al.*, 2000; Kale & Anand, 2006; Peng *et al.*, 2008), a management team may decide to repeat what it has already achieved and tend to continue building a relationship with the government to compete in the domestic market. However, government ties may only benefit firms in the domestic market. Firms may find it difficult to transfer these relational advantages to advanced economies, as such resources may lose their advantageous nature (Cuervo-Cazurra *et al.*, 2007)when transferred to first world countries. Based on the above discussion, we posit that government ties tend to influence EMFs to follow their path dependents to operate successfully in the domestic market but not in the first-world markets

*H1: Government ties negatively relates to an emerging market firm's international expansion into advanced economies.*

#### *2.4 Market Critical Resources and the International Expansion of EMFS Into Advanced Economies*

Per our discussion in the previous section, the impact of market-based critical resources on the international expansion of firms has been heavily investigated by IB scholars. Market-based critical resources clearly have a positive impact on international expansion of EMFs (Bonaglia *et al.*, 2007; Delery & Doty, 1996; Elango & Pattnaik, 2007; Guillén & García-Canal, 2009; Khavul *et al.*, 2010; Lau & Ngo, 2004). Firm specific advantage allow firm to overcome liabilities of foreignness and compete against the local firms. We operationalize market critical resources by marketing capabilities and operational efficiency of EMFs.

*H2a: Marketing Capabilities positively relates to an emerging market firm's international expansion into advanced economies.*

*H2b: Operational Efficiency positively relates to an emerging market firm's international expansion into advanced economies*

### **3. Discussion and Conclusion**

The rise of emerging-economy firms continues to be striking and is likely to become a more and more important aspect of research in international business. According to the Forbes Fortune 500 list, the fraction of firms from emerging markets has risen from 0.9% in 1995 to 10% in 2010. Although such a growing phenomenon has led international business scholars to focus on the international expansion of EMFs, theoretical developments as well as empirical studies on this topic are still scarce (Black & Morrison, 2010; Chittoor *et al.*, 2009), and typically focuses on the expansion of EMFs into emerging markets other than their own (Cuervo-Cazurra & Genc, 2008; Khanna & Palepu, 2006; Li & Yao, 2010).

This study is one of the first attempts to better understand on what factors drive EMFs expand into developed markets as well (Miller *et al.*, 2008; Thomas *et al.*, 2007; Yamakawa, Peng, & Deeds, 2008). Specifically, we argue that not all type of critical resources that enable EMFs to expand into advanced economies. We, therefore, disintegrate the type of critical resources into market and non-market critical resources. While, existing studies provide theoretical insight that market critical resources enable EMFs to expand abroad. However, the role of non-market critical resources in international expansion into advanced economies is understudied. In this study, we argue that non-market critical resources prevent EMFs from expanding into advanced economies.

### **4. Managerial Implication**

This study has important implications for managers and policymakers. For managers, these include the strategic decision of whether to stay at home or to expand into advanced economies. If they want to expand into the developed institution, they may consider relying less on governments, private networks, and the domestic elite. However, if they want to stay in the home market, they have to cooperate with the government even more to gain unfair advantages. Therefore, firms need to determine their strategy of whether to expand into developed institution or venture into similar institution. In addition, this research also sheds some light for the policy maker. In some emerging countries, the governments play a critical role in the international expansion of emerging economy firms. They tend to protect their domestic firms. Some of them seem to be neutral, while a few pushes their firms to expand abroad. Hence, the policy maker can also set the firm's future course of action. Such a policy should represent a mutual collaboration between the public and private sector. For example, the policy maker may want to push firms to expand internationally, but their local firms may not be ready to compete in the advanced economies. Hence, policy making should be derived from both sides rather than borne of a top-down decision.

### **5. Limitation**

In this section, we highlight a few potential limitations of this study. According to the government ties variables, there is a limited generalization to countries, where pro-market government is presence. For example, one can argue that Chinese government is very active in pushing their state-owned enterprises to expand abroad. Forming a relationship with the government may enable firms to access to critical resources and gain support to go abroad.

The empirical results highlight the important of these differences across countries. According to the results the coefficients of government ties are positive and significant in Indian and Malaysian subsamples but not in Chinese subsample, suggesting that, while our data supports our argument, the importance of country-specific factors should not be underestimated.

## 6. Future Research

Beyond the future research opportunities just described, we believe that an analysis of the co-evolution of institutional learning and international expansion, a relationship that provides the interplay between factors at the firm level and those at the institutional level. Because firms expand abroad in multiple host countries, they can gain different institutional experiences. Therefore, we need a dynamic model, which provides a mechanism that explains this relationship, in which firms learn from one specific institutional environment before expanding to another one. Such learning can help firms to abridge the institutional gap of the home and targeted host market. For example, in order to enter Japanese market, Indonesian firms may consider gaining institutional experiences in Taiwan and South Korea to experience institutional differences and change their routines and organizational paths.

Second, the dynamic model of the institutional advantage is an interesting area. EMFs can gain institutional advantage if they enter into less developed countries (Khanna, Kogan, & Palepu, 2006). However, when they enter into an advanced economy, such an advantage is eroded, though they can gain knowledge from this institutional setting. Hence, they can reconfigure their institutional knowledge to fit the requirements of multiple markets. We aim to model such dynamic institutional learning by using the partial differential equation. The mimetic of the heat-wave equation can be used to model such dynamic settings. (Once a new source of knowledge diffuses inside the firm, an existing knowledge source may dissipate outside a focal firm).

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