

Awaken passionate customer with innovated CRM

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Abstract

The twenty-first century is the learning century and Thailand to be ready for Thailand 4.0 with new model development that it is driven valued – based economy with innovation. The key to a successful economy is to create an enabling environment that is conducive to investment and business that will maintain growth well. A digital economy, customer is socially connected with others in web of communities. Undeniably, a customer is at best a sensitive person; a customer is a great resource of a company at the same times. Thus knowing how to understand and response your customers as much as possible is an outstanding competitive advantage. This paper clearly describes the districted roles between customers and consumers with 6Ws 1H question words for the right approaching. It depicted CRM is composed of acquisition, giving, and retention activities as samples are given. Purposefully establishing customer community in order to join the common interested group of people and responding their expectation well. Lastly, six best practices in CRM with innovation.



Purpose

Its purpose is to build the sustainable relationship management with customers through 6 practical innovations.

State of the problem

According to, the diversity of race, religious, and lifestyles are happening in society and intense business competition. It is quite less to predict and forecast in demand and customer desire. More recently, customer choices in purchased decision making have arisen from the fast growth of online channel, or even Omni channel. Irrefusingly, repeatedly purchasing behavior is underrated and few customers' subconscious mind tell themselves that existing brand is better solution than the new one.

Methodology/ Approach

This paper was collected and analyzed from research study; publication, working experiences, and descriptive information were run to study the extent of all customer journeys with their purchasing through online channel and in store experiences. A large – scale survey customer of business works as the study setting.

Limitations

A large diverse in culture and norms in the market leads to the different types of business and customers, therefore, it has no standardized equation or static strategy to work fit for all.

Value

While several papers have been conducted on how is important of regularly customer caring, but this paper studied from many classical and success brands, are using incentives stimulus –response theory, marketing campaigns, or sales promotion to plus sales, so on.

The author also argues that innovation is an imperative wealth of intelligence source for competitive advantage in term of customer relationship strategy with technology.

Keywords: Customer relationship management, Customer analysis, Customer community, Creative innovation



Introduction

In the past, an economy is relied on the information and knowledge based – society, later its concept is focused on the product or service development through innovation process instead, it led to creative economy. In the mid of 1990s, business climate was severely pressured continuously until many scholars, professors, or researchers in academic field deeply recognized how was important of the crucial competitive advantage and differentiation same as the “innovation” and “customer satisfaction” concept was being recognized as the asset of the organization (Frappaolo, 2006).

In 2000s, quality of life is the most well known notion for workplace. Enter in the 21st century; technology advancement changes people life style and quality of life better. It is called a digital economy, or internet economy, it conducts business through market based on World Wide Web technology. A digital economy will be the key determining factor in organizational success or failure. The most effective organization will be those which recognize how to make quality of customer life better with your product. Currently, SMEs is highly competitive. Especially, retailing sector needs to develop long lasting relationships with their customers. Hence, customer relationship management concept has influenced the degree to which entrepreneur is able to retain good relationship with customers.

One of the most challenging for manager in 21st century based on digital economic will be figuring out what the business ought to know for the customer expectation because the customer satisfaction is quite complicated to anticipate. Brand loyalty seems to be less and less in customer decision subconsciously. Therefore, the individual or personal customer approaching, it is so attractive today. Although many marketers have effort to response customer needs as much as possible, they are rarely to achieve in sustainable customer relationship strategy.

Customer and consumer

The terms "consumer" and "customer" are often used interchangeably. Author has witnessed many businesses fail precisely because they fail to understand the distinction between “Consumer” and “Customer”, thus this paper would indicate how different role between customer and consumer is.

Customer is the one who purchase a product or service. Consumer is the one who actually use or consume a product or service; it means the customer may not be the actual consumer of product or service in some cases as table 1

**Table 1** Consumer vs. Customer

Consumer	Customer
Loudon and Bitta, 1993	
Generally refers to anyone engaging in any of the activities used in definition of consumer behavior.	Typically used to refer to someone who regularly purchase from a particular store or company.
Jackson, 2005	
The person who uses the product and service or may be affected by its purchase.	An individual or organization who buys a product or service.

Source: Loudon and Bitta (1993), and Jackson (2005).

Indeed, entrepreneur should understand who consumer is, who customer is and should be geared his marketing communication direct toward the right group, shortly, customers will buy product or service only if consumer demands product or service, therefore entrepreneur efforts should target the end user as opposed to the buyer.

Customer checklist

The customer is the most valuable resource of the organization, and the customer fundamentally changes the dynamics of a marketplace. The customer is the source of everything, as well as a large influence on business performance. Therefore, one key to driving an outstanding seller is a sense of the fortuneteller, or a curiosity in customer trends; the seller must thoroughly understand who the valued consumer is and both his internal thoughts and external behavior. 6Ws 1H are the marketing tool to understand

“consumer” and “customer” in details as below;

Who is the “real or right” Customer? Research resulting from TARP (1979) indicates that 20% of good consumers will generate 80% of income, and 10 % of loyal consumers will generate 90% of income, while 80%-90% of customers are not main stakeholders of the business.

What is the right value of the product? Even businesses that produce products rarely innovate when it comes to process. Right products that suit the customer’s need, might unnecessarily differ from better or cheaper production. Contradictorily, the valued product can make their lives more comfortable, while customers can’t fill this need with other brands.

Indeed, many products are introduced to the customer at the wrong time—such as early bird Monday morning, on the way to office, or a parent who stopped back at home with a crying infant. Thus, the seller ought to be aware of the right time for the customer rather than focusing on other reasons, like low cost advertising,



logistics, or whatever marketing reasons. The biggest challenge of selling is effective time recognition; when the show must go on and how to go deeply into customer memory; first impressions are really essences. We all recognize that a warm welcome lies at the heart of selling.

Where is the right location for each business? Where is the right location for customer response? It is widely accepted that location is the crucial competitive **Why** do customers want to buy these products, and why don't they want to buy other brands? In most markets quality has never mattered more. Currently, the customer is passionate about quality as a personal value rather than massive value. The active seller should find the desired product or service through customer feedback from websites, messaging, complaints. They must regularly check feedback to ensure sustained relevance. Praiseworthy quality is the main of core value. It is a significant competitive advantage.

Whom have influenced toward each purchasing? Who is **"influencer?"** involved in buyer decision making? Influencer can divided into direct influencing and indirect influencing. Sometimes, purchased decision maker is occurred from these famous celebrities, word of mouth in social media, etc (indirect influencer) whiles purchasing' source is by themselves from existing experiences, etc.

How do customers consume these products? Perhaps a better mode of analysis is to observe consumer behavior including rate of usage and frequency of consumption. For example, Marks & Spencer created the "Shwopping" program. It combines the ideas of

advantage that it's quite difficult to imitate. A key to success is a place or the route where customers pass daily, including transportation, subway, elevated trains, etc. Usually, there are many theories mentioned about location selection; Triangle theory, Gravity theory, or Chinese belief of how to locate building theory (fortune theory). Basically, location surveyors have to study the possibility of buying, frequency of buying, and customer lifestyle.

shopping and swapping. (Kuehn and McIntire, 2014) In this program, customers can donate a piece of clothing they no longer want whenever they buy new clothes at the store. They will get a discount coupon for their purchase.

In the past decade, sellers have done various things to engage customers with high quality products, and mass production for low prices. Business traditionally thinks about competitive advantage in term of better products. However, today marketing is changed to flexibly respond to customer trends in globalization. Thus, product differentiation is quite difficult to achieve. Moreover, technology becomes obsolete quickly, and new approaches are appearing every day. Undeniably, currently almost all marketing activities are implemented based on consumer centric views instead.

Customer relationship management (CRM)

Kumar and Ramani (2007) stated that a *"firm must produce superior products, sell smarter, and understand market as a whole but ability to successfully interest*

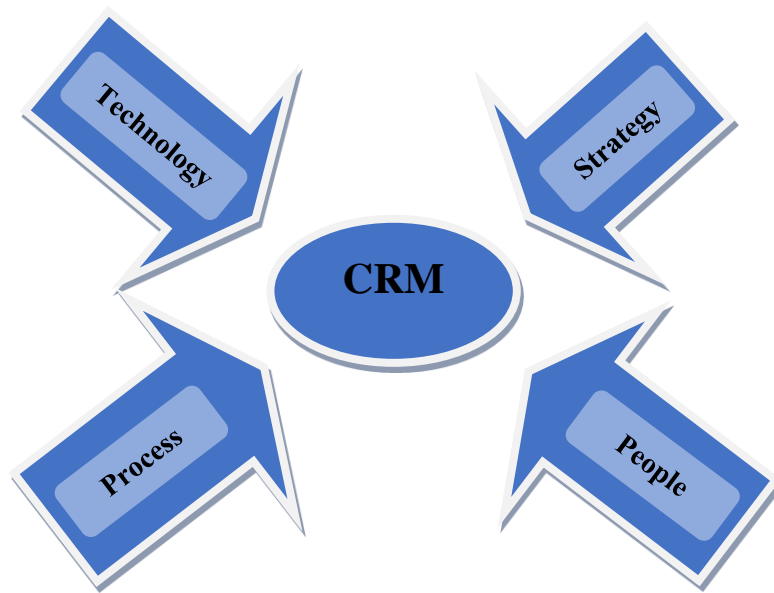
with individual customers offers the most important source of competitive advantage.". Messner (2005) viewed that CRM is a strategic and action-oriented view on the relationship between customer and company. CRM is a comprehensive approach for creating, maintaining and expanding customer relationships (Anderson & Kerr, 2002).

CRM is a process that addresses all aspects of identifying customers, creating customer knowledge, building customer relationships, and shaping customer perception of the organization and its products (Peelen, 2005). In summary, CRM is the long-term customer- seller relationship building, developing, and retaining. The seller must leverage customer insight, deliver a rich store experience, and thus the seller ought to inspire, focus, serve, and follow up post buying impressions—especially customer complaints as the easiest method of improvement.

The results of several research projects indicate that consumer complaint is very useful form of consumer –initiated market information. (Kasouf *et al.*, 1995) One of the benefits of customer complaints is that it gives dissatisfied consumers the chance to vent their dissatisfaction. (Kolodinsky and Aleong, 1990; Richins, 1980). Alicke *et al.* (1992) found that the most common reason for complaint was to vent negative emotions. Oliver (1987) also confirmed that complaint reduces dissonance caused by dissatisfaction.

Halstead and Page (1992) agreed in TARP (1979) that complaint induced dissonance reduction and positive relationship between complaint and repurchase intention, and also cited from research result about customer response that satisfied customer will tell other 3 more people. Dissatisfied customer will tell other 12-20 more people. 98% of dissatisfied customer wouldn't say a word, but give up buying. 65% of customer with negative experiences gives up buying. Seeking new customer cost higher than retaining existing customer 3 times. Furthermore, Blackmore (2016) suggested audiences that LED approach work for consumer complaint recovery as the following; listening (L) is the first step to tension release. It is the physical technique to let another party calm down. Empathy (E) is the next step to express your common feeling, to understand or care another party, and it is also share sympathy and compassion. Next, action (A) is the acting to do something or solve any problems, resolve undesired situations. Lastly, desire (D) is the last step to make any memorized about your brand with first or last impression with serial position effect.

In addition, successful CRM implementation requires the following four crucial elements: strategy, people, process, and technology. (Crosby and Johnson, 2001)



Source: adjust from Crosby and Johnson, 2001

Figure 1 Four elements of CRM implementation

From figure 1 these four elements of successful CRM provides strategy, people, process, and technology to support this sustainable relationship. CRM strategy is the guide to response and retain customer that's work based on an understanding of customer insights and create value proposition for customer segment. This paper focuses on CRM strategy. Absolutely, strategy is one of the most important stimuli driven toward customer relationship management with talented people, flexible process, and effective technology.

Today most CRM programs and services depend more heavily on big data, technology, and management information system than in the past. These big data, clouding, various platforms and software applications what is known as **electronic CRM (e-CRM)**. (Gardner, 2107) It concerns all forms of

managing relationships with customers when using web – based technologies. It arises from the consolidation of traditional CRM with the e-business applications and covers the broad range of information integration technologies used to support a company's CRM strategy. (Prenhall, 2012) Moreover, **mobile CRM (m-CRM)** is a type of customer relationship management application designed to executed, operated, and accessed through mobile platform. M- CRM enables entrepreneur to manage his business transaction with customers through mobile applications on wireless mobile devices, etc. (Technopedia, 2017)

Both the effective E-CRM and M-CRM involves collecting customer profile, analyzing customer information, tracking transaction history, or optimizing customer's relationship through

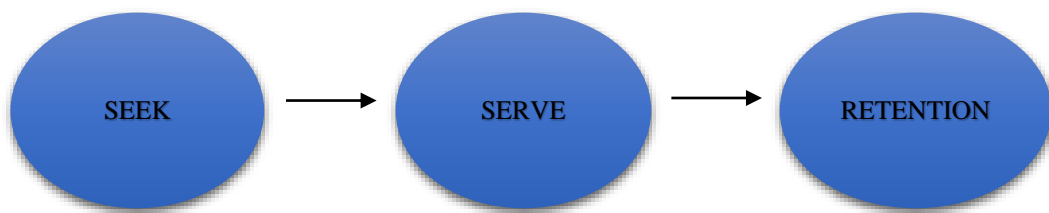
customer analysis application, real time decision making application, personalized message application such as Coca Cola Germany used a technology platform to take customer service in high level which it called “*Salesforce App Cloud*” (Salesforce, 2017) as the core technology behind its sales and customer service efforts. It is a big toolbox can build applications for any department in the company, access customer information, generate work orders, and dispatch field service technicians in the service mobile app in real time 24 hours.

Customer relationship management strategy (CRM strategy)

A new type of marketing is emerging at the customer center of business. CRM

focused on the centric - customer marketing that is very important key success factor, as not all customers on equally desirable (Ryals and Knox, 2011) and profitable (Thomas *et al.*, 2004). It encompasses the production process, distribution channel, logistic, and even service providing including long term relationship retention. Customer relationship management is an integral business strategy; a great deal of attention is concentrated on the desired individual base. To accelerate the retention of powerful long-term customer relationships, sellers have to unlock the mysteries of customer insights, the potential customer’s desires, the business direction, or the way to respond to customers.

Generally, customer relationship management strategy contains three phrases, namely; seeking, serving, and retention strategy.



Source: adjust from Fisk, 2009

Figure 2 Customer relationship management strategies

First, seeking strategies that define the “*right*” customer, although this group of people is 10% or 20% only, they generate 80% -90% of overall income. Best practices in market segmentation suggest that the marketer should identify segments based on customer needs or

benefits sought, rate of usage, frequency of change, innovativeness, etc. There are many seeking practices for the potential customers of SMEs are



- Collect existing buying information, and understand the customer's detailed
- requirements including frequency of buying, rate of buying, quantity of each purchase, type of product selection, duration of decision making, period in buying, term of payment, service response satisfaction, or any feedback from customer.
- Analyze overall experiences, history of buying, the reasons for buying or not buying, and specific problem solving or any dissatisfy excuse. Sometimes, the best way to find out the root cause of a problem is to experience the product or service as a customer would.
- Track customer complaints and compliments in type and frequency.
- Observe in pre-buying, buying, and post-buying attitude.
- Study the possibility of new customers for business expansion.
- Evaluate trends of potential customers through marketing activity.
- Develop other strategies for buying behavior adjustment such as customer behavior changing from seldom or rarely buying, or even no buying to regular buying.
- Anticipate the specific target group for maximum value investments.

Least but not last, choosing the right customer is the first step in a winning strategy for CRM; make sure by putting yourself in the customer's shoes. It's obvious to think about utilized resources with the highest potential customer gains.

Secondly, serving strategy has been frequently mentioned. The seller should be able to prioritize the urgency, or crisis condition. Furthermore, there are many impressed serving practices of entrepreneurs as the following; clearly show the core value of product or service to the customer, stimulate different motivations with various groups of customers, create an exclusive experiences in the store (off line channel) or off the store (online channel), and provide the supreme high quality for an individual, the way business sector provides the extent of corporate social responsibility (CSR) sustainably, as sample given below:

- Facebook provides free platform for content sharing among people around the world.
- Air Asia provides airline service as *"anyone can fly"*. (model innovation)
- Singapore airline creates soft smells starting from their first step onto the aircraft. Especially service from Singapore girls (service innovation)
- Banyan Tree serves everything as a customer experience and leaves space for customer imagination.
- Amazon is the biggest online book store based on customer driven listings. They also list other retail stores besides their own products.
- Starbucks is the third relaxing place beyond home and office.
- Disneyland built a wonder land by changing sandy soil to a castle in an orange garden in California
- New balance balances body and mind through running a shoe designed for your foot.



- Wal Mart made it possible for lower classes to buy the same kinds of products as higher classes.
- Oxfam expands the scope of “giving” for fulfilled people to donate stuff to minority groups of people appropriately.
- Evian mineral water uses the “Live Young” slogan to imply that they provide freshness.

To maintain serving approach, the seller must educate the customer in the function or emotional value. The powerful comparisons between trading their payment for the goods they receive in each purchase are whether it's worth their consumption or not.

Thirdly, retention strategy is a strategy for existing customer expansion and new customer maintenance. In addition, there are several marketing activities to retain regular customers, for instances; greeting manner to customer should take place at the right time when the customer is available rather than when the seller is feeling free. Transactions should take place at the right location for customer rather than a low rent location for the seller.

- Buy and sell the product under good circumstances for the customer.
- Ask for permission in product description, and do not interrupt them with digital marketing sounds, door knocking, or calling during meetings, etc
- Select subscribe or unsubscribe for information allowing through social media.
- Support customers for a better life, seller should not quickly close the sale.

- Talk based on an exchange of opinion or two way communication. The seller should not only discuss coupons or discounts.
- Keep long-term customer relationships goes with fundamental sincerity.

Companies acts like the best friend with loyal customers. Take a lesson from Harley-Davidson employees who spend time on the road with customers to develop the kind of intimacy for Harley's status as a best friend.

Moreover, CRM was perhaps excusable because there was no other easy way access to what was inside the consumer's head and heart. In summary, listening to what the customer wants rather than measuring what the seller wants to measure. Thus, the seller ought to apply technology, people, process, and strategy to fulfill the commitment of CRM at long last. To accelerate customer loyalty, as Pareto 80/20 rule: 80% of profitable business for 20% of regular customers. (Hoffman and Kashmeri, 2000; Ryals and Knor, 2001). This reason, sellers will actively develop precious customer insights, customer caring, and loyal customer cultivation, using classical concept “*personalization marketing*” was defined as the practice of one to one marketing through the mass customization (Dyche 2002; Hart, 1995), allowing customer to request his own needs for service or product development.

Customer community

Community is the new segment. Kotler et al., (2017) cited that community is naturally formed by customers within the

boundaries that customers themselves defined. Customer community is the commonly interested group of people who have come to be joined to exchange or discuss any information, activities or shared experiences. To an extent, customer community consists of these elements: partnership with customers, co-operative groups, and supportive customers (Fisk, 2009).

A good partner should fill in a gap to complete the customer problem. The seller should provide solutions for a better quality of through his product or service. The seller ought to understand a customer's expectation and a customer's perception for fulfillment. Subsequently, the partnership with the customer is based on these principles:

- Focusing on a few customers rather than the mass market.
- Analyzing and integrating big data for customer insights.
- Getting in touch with customers through websites, social media, call centers, retail outlets, point of sales, flip retailing (catalogue), or direct sales, etc.
- Team building to take good care of customers in long term relationships.
- Understanding and establishing intimacy with the customer clearly.
- Developing disruptive marketing, innovative marketing strategy and customer relationship management planning.
- Training talented and skilled for service providing.
- Spending more time with customers in various techniques such as single channel, cross channel, multi channel and Omni channel in appropriately.

- Adding innovation in products, services, processes, business models, or paradigms.
- Always solving the customer's dilemmas promptly and accurately.

Co-operative customer

Co-operative customer is the outcome of an achieved partnership with the customer. ***“Brand Image”*** is the mediator that joins a large group of people that share information, therefore, it is the crucial responsibility of the seller to build brand awareness, and brand loyalty such as Starbucks, Crocs, Gucci, Facebook, LINE, Apple, Harley-Davidson, Hermes, Louis Vuitton, Nike, La Mer and so on.

In fact, the hub of brand is its center of social trends. A great brand can connect a community quickly with networking through information diffusion; customer community has the power in terms of price negotiation, control the direction of brand. It highlights the role that brand plays in long relationship building and show whether a shift of brand takes place between the customer and their purchasing or not.

Typically, the characteristics of customer communities (CCC) have common interest and features are the priority reason for establishment. It can entice new customers and expand existing customers to take part; it is a flexible mode of interaction among common-mind people, and also post, shares value, content, or experiences via blog or group establishment. In addition, customer community develops CRM tool in reliability and trust among team members, and support their own culture, or norm in the local community.

In general, these community works the best based on the dynamics in arduous competition, or solved dramatically changed business climates; its outcome is short speed of product life cycle and fast growth technology. The seller ought to think conversely by viewing from the outside that is the source of customer insight revelation through approaching the customer regularly, listening to them carefully, thinks instead of them. Such a seller would like to appeal to customers passionate in business; the seller must be able to read the customer's minds; what they would like, or what they would not like. If the brand can be absorbed and adhere to customer memory, then this situation will lead to the spread through word of mouth in your business.

Absolutely, these loyal consumers will communicate with each other about common interests. This society is the potential customer or type "A" customer. It does not require further investment, on the other hand; they will generate extremely valuable ideas for your business indefinitely. Customer analysis perspective in general is the viewing of outside to inside. Growth in the future, and also is the real product designer as well.

Supportive customer

Notwithstanding heterogeneous customer lifestyles, an entrepreneur should to maintain these differences. Heterogeneous components make up the variety of products or services on which responding with customer needs. An entrepreneur must ensure that the product or service solution is sufficiently diverse among customer satisfaction.

The primary reason to generate business is not only to earn maximum profit, but also to change the customer's life in a better way. Building supportive and loyal customer base is quite challenging and requires a strong relationship of loyal customers, especially emotional support. The seller occasionally needs to vent when customers are dealing with irritating products or services. Sometimes the seller also turns to an individual for support from a fresh perspective on each problem. Service from trusted sellers serves as an outstanding competitive advantage.

Loyalty customers are beneficial for a number of reasons that is loyalty customer will buy more, stay longer, and pay more even without discounts or if prices go up. Moreover, loyalty customer will spread a good opinion of the company through word of mouth and help you acquire new customers, as the results; operational cost is decreased, and quality of business development is increased continuously.

Innovation with CRM

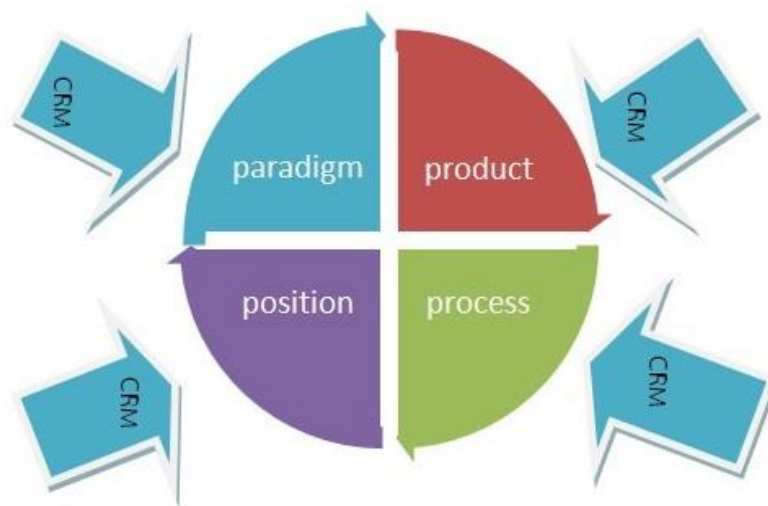
Disruptive marketing is moving from producing product to innovative product; emphasizing on promoting technology, creativity, and innovation in focused industries and from a production-based to a service-based economy. Traditionally, innovation serves as benchmarks of many organizations; innovation explores the breakthrough product or service and enhances customer experience. Tidd and Bessant (2010) stated that innovation can be classified into 4 dimensions (4Ps) as follows are given:

- **Product, and service innovation** changes product attributes or service

form such as software instead of windows vista, or Toyota Prius with hybrid technology that saves energy for the driver.

- **Process innovation** changes the operation or production process by improvement such as mobile banking or online financial services for convenience.

- **Position innovation** changes business position and also expands target market such as Dell computer emphasized on individual user.
- **Paradigm innovation** changes in business model for competitive advantage, for example Southwest airlines originated low cost airlines.



Source: adjust from Tidd and Bessant, 2010

Figure 4 Type of innovation with CRM

From figure 4, any type of innovation has impacted the buying decision maker, influencer, or regular customer; innovation can stimulate and prompt responses to black box buyer. Significantly, it would be great to contribute the story of your business to the society and environmental innovation perspective.

Although it is a minor innovation in existing product or service, it can

enhance exclusive customer experience; it's the effect of motivation theory, for instance, Zero Coca-Cola renovated slim can package to tempt confident teenagers, the result in its market share is overwhelming. Irrefutably, innovation made customers' quality life simpler, it also reduces cost of operation and absolutely adds more value of products or services.



For more examples, Schmitt (2010) mentioned that Apple Computers returned to its innovation roots in late 1990s and in 2012 Apple Computers was the most admired organization of the world, Apple Computers tracked records in product innovation; it had a positive effect on customer loyalty, which relies on innovative products such as iPad, iPod, and iPhone, etc.

Moreover, at the beginning of Amazon.com, it was the small innovation that led to the great and smart online experience. Amazon.com is one of the first web sites to customize online experience. Amazon.com has gradually increased more features that provide visitors with information about products by comparing it with other brands. Bezos (2012), the founder of Amazon, stated that *“we’ve had three big ideas of Amazon that we have stuck with for 18 years, and they are successful; put the customer first invest, invent, and be patient.”*

Nevertheless, if any entrepreneur strived to have fun in some part of creative innovation through their business solution, whether product, process, paradigm or business position, they can easily become the real partner for customer eternally.

Practical innovation with CRM

The expected implications of this paper is really important which is an entrepreneur has developed brand image in almost every moment including zero moment of truth (ZMOT) and purchased experiences with product –service category, store circumstances, service provider, and the social media in the digital economic prominence is eminently blooming.

These global mega trends are big data, advanced artificial intelligence, business intelligence, internet of things, virtual reality, robotics, energy saving, green marketing lead to disruptive marketing that it is changing consumer behavior and consumer lifestyle from a regular consumer to be a loyalty consumer with a special personalization or individualism and move forwards to be a partner finally with customization approach.

Fulfilled CRM strategy required working together in customer understanding and managing practical innovation will be achieved by an individual efforts with a high level of seeking strategy, serving strategy, and retaining strategy in right time with right media in right channel.

Six practical implications through CRM with innovation

As entrepreneur is recognized in how to apply these concepts by expanding the new target groups and retain the existing regular retail consumers are the particular steps for implementation, especially in SMEs sector. As awareness, six practical implications through CRM with innovation are shown as below.

Six practical CRM with an effective innovated idea

More cues for exploring this reciprocal effect from innovated practice to maintain the customer relationship management can be found with six practicing are these following;

Initially, Best contact: Interact between customer and seller within designated big data base with these *6 Ws 1 H* question words checklist through observed customer behavior to uncover new opportunities. **Second**, Consumer

foresight can answer how innovated ideas will be adapted in new product or service. **Third**, outside consultant, or learn in the market by thinking like designer in order to cope with dynamics change and useful improvement for creative solutions. **Fourth**, marketing communication via communicate in simple statement with accuracy and assurance. **Fifth**, Membership campaign aims to increase opportunity to repurchase and word of mouth for information diffusion. **Lastly**, implement the best and practical ideas with CRM Involvement: be ready for suggestion of new product, service, process, and model within customer community for fast growth business.

Recommendations

In essence, an entrepreneur ought to applied innovation solution to satisfy individual customer, provide business valued until customer can perceive them in your business outstanding positioning, rather than the price they pay. Lastly, the same service features can be given to different customers in different performances much more achieved than effort to give the same practice to everyone in the same way. Successful business must rapidly manipulate its marketing strategies to tailor demand of personalization.

Conclusion

The consumer is the person who engages in any activity of consumer behavior while the customer is the person who regularly purchases from a specific store or brand. Initially, customer analysis

answers these questions 6Ws 1H for targeted approaching. It matters a great deal what the context of customer relationship management is the propriety of customer satisfaction. The 4 components of CRM are people, process, technology, and strategy.

This paper focused on CRM strategy, its 3 components: seeking, serving, and retention strategies. Initially, seeking perspective based on segmentation in term of demographic, geographic psychographic, and socio-cultural, in order to find the “Right person”. Serving perspective renders the best solution for customer buying decision.

Lastly, retention perspective, its main obligation for taking good care of the customer, is including developing continuous seller-buyer relationship, which serves as “you are always my special guest”.

In general, customer community is a group of people commonly interested in something. It consists of 3 elements: a partnership with customer, co-operative customer and supportive customer. A partnership with customers oriented to the challenging task of placing together the entrepreneur and the customer at the right place and time. Also, to be co-operative with the customer, to exceed customer expectations, and to always try to encourage customers to come back, and to spread awareness by social network, and lastly, is oriented to the supportive customer through product, or service consumption, and make their lives better than others.

Finally, nearly all businesses fail to satisfy customers. They are not likely to stay in business very long, unless they are in a monopoly position or they are the



final choice in that industry. If you would like to let your business live life everlasting, you will enjoy learning in a creative manner through the best practical CRM with innovation; many

organizations can stand for a century. That's why many global brands try to addict customer minds from generation to generation prospectively.

“Innovation has been plays important role side by side with CRM”

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Factors determining performance of banks listed on Shanghai stock exchange of Thailand

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Abstract

The purpose is to investigate how do the bank specific factors as liquidity, capital adequacy, assets quality and management efficiency determine performance expressed by return on equity, return on assets and net interest margins of banks listed on Shanghai Stock Exchange and the Stock Exchange of Thailand. Further, GDP growth as macroeconomic variable was added into the investigation.

The findings showed Banks listed on Shanghai Stock Exchange own the Capital Adequacy, Asset Quality, Management efficiency and GDP Growth as significant variables. While banks listed on the Stock Exchange of Thailand own Capital Adequacy, Asset Quality and Management efficiency as significant variables. However, liquidity was found to be insignificant to all chosen banks.

Keywords: Listed banks, Bank performance, Bank specific factors,
Macroeconomic variable



Introduction

With chasing back to past 20 years, the global banking sector had been transformed in the environment with impacts on bank performance. By seeing the internal and external factors been affecting bank's profitability throughout the time manner, study on the factors determining bank performance has been hot topic that attracts the concern of purposes of academic research, financial market and banking supervising. On review of the global finance crisis which have had an impact on the worldwide banking industry, study of bank performance has been more important (Dietricha and Wanzenried, 2009).

China-Thailand relationship began since 1975, the relationship between 2 countries has grown significantly (Liu, 2012). The bilateral trade relations grow every year. Updates till 2012, China has become Thailand's largest principal export destination, and the second large principal import source.

China opened the banking markets to foreign investment by the end of 2006. Since 2005, foreign investors could purchase a limited amount of shares with partial privatization in three out of four big state-owned banks, which are listed on the HK and Shanghai Stock Exchange. The state-owned banks were with high non-performing loans, and were re-capitalized

during the special government bonds issue, then the non-performing loans were transferred to asset management companies in 1997 (Heffernan and Fu, 2008). On the Thailand side, before 1997 another financial crisis ahead of the global one. Local banks were close the local investors, as the foreign banks focus on the wholesale customers. While after the 1997 crisis, local banks began to attempt for foreign investment, in order to collect large amount of new capital which could not be provided by the local investors (Chantapong, 2003).

The "Global Financial Crisis" began from the developed countries to global. Which led to series of downturns and slump of the global economic in 2007 summer. These 2 countries, as a part of Asia were hence affected, even though they are away from the crisis burst point. Stock market in China was damaged since October of 2007 (Schmidt, 2009). On Thailand's side, the Thai economy was shrinking with the global slump (Chirathivat and Mallikamas, 2010).

This study will refer to the commerce part, particularly the listed banks on Shanghai Stock Exchange (SSE) and Stock Exchange of Thailand (SET). With on side, 14 banks in China and 10 banks in Thailand are chosen.

Financial statements and financial ratios will be utilized to measure bank performance. On the other hand, GDP



growth as a measure of economic growth that affects demand of bank asset will be involved (Ongore and Kusa, 2013).

Literature review

Performance is a channel to define the existence of the set objectives or goals of a firm are achieved in a particular time period. Bank performance is defined as the capacity to generate sustainable profitability (Dr. Oladele, et al., 2012). The damage done by financial crisis has become seriously for emerging market countries. While a decline to downturn of profitability might decrease banks' ability to tolerate risk. (Chantapong, 2003). Impact from banks characteristics, macroeconomic variables and financial structure could be utilized for bank performance examination purposes. (Björnsdóttir, 2010). As most studies proof capital, loans loss and expense control are factors affecting performance, bank-specific along with macroeconomic factor across banks and time periods can be utilized to examine the contribution to variance in profitability (Vong and Chan, 2009). Financial statement analysis is a way to measure the past, current performance of firms. It tells the terms of assets and the terms of the source of capital, therefore presents the internal structure (Appiagyei et al., 2012).

ROE (Return on Equity), ROA (Return on Asset) and NIM (Net Interest Margin) are used to evaluate banks performance on profitability as dependent variables.

ROE refers to the ratio of net income compared to the total equity or capital (Khrawish, 2011). It measures how efficiently a company operates the money from shareholders (Wen, 2010). Which is the return to the shareholders of their equity, without involving the risk level that is linked to the leverage (Dietricha and Wanzenried, 2009). This ratio is related to practice and, therefore, considered to be a good indicator for investments, but it is irrelevant to debts and such ratio should be observed through a long period when applied for analysis (Björnsdóttir, 2010). A profitable feedback on equity is what a business supposed to be and what the investors expect in return. Because the ROE states the efficiency of how a bank is generating the investors' funds (Ongore and Kusa, 2013). ROA tells the profit that returns from per unit of assets and indicates the effectiveness of the bank on generating profit (Dietricha and Wanzenried, 2009). It states the efficiency of a bank using the resources for its income and the ability of management to utilize the asset (Ongore and Kusa, 2013). Return on assets measures how profitably a company operates related to the assets (Wen, 2010). Furthermore, it states the bank's efficiency of using the resources from the institution for its income (Khrawish, 2011). Investors

can see how efficiently the bank converts its assets to net earnings by observing the return on asset (Chantapong, 2003). NIM expresses the financial institution's operation efficiency and the ability to generate income and expenses (Omran, 2007). It measures a difference of bank's interest income without interest payout as the net, to the average earning asset (Ongore and Kusa, 2013). NIM is stated as a percentage of earning on loans in an exact period of time and amount of asset out of costs from interest on borrowed funds, divided by an average of assets in the same period (Gul, Faiza and Khalid, 2011). NIM is the measurement of the gap of interest income and interest expenses, compared to the asset. The higher the ratio indicates, the higher profitable and the more strength the financial institution is (Khrawish, 2011).

LTD (liquidity management), CA (Capital adequacy), AQ (Asset quality), ME (Management efficiency) and GDPD (GDP growth) are utilized as independent variables.

LTD relates to the ability of repaying depositors' funds redemption (Sarita, Zandi and Shahabi, 2012). Liquidity is associated with lower rate of return, when LTD ratio is higher, the liquidity will be lower, in other words, higher LTD ratio leads to lower profitability (Dang, 2011; Said and Tumin, 2011). CA refers to the firm's available capital to cover the business risk (Athanasoglou et al. 2005).

There are supports that the capital to assets ratio negatively relates to the total revenue dependent variables (Staikouras and Wood, 2011). However, there are as well points explain the positive relationship, a higher ratio might bring higher profitability by reducing subjects related to risk and alternatively expand into some other profitable subjects (Berger, 1995). AQ measures non-performing loans level as the loan portfolio effects banks profitability by its quality. It's the most risky issue for a bank to confront losses that incurred by delayed or illicit borrows (Dang, 2011). The lower the ratio the better the asset quality is (Sangmi and Tabassum, 2010). ME is the capability of the board of management (Dang, 2011). Such to measure the percentage of operating profit from income (Ongore and Kusa, 2013; Sangmi and Tabassum, 2010).

GDPG as a measure of economic activity of an economy, is commonly used as a macroeconomic variable, GDP Growth is supposed to effect bank performance positively (Said & Tumin, 2011). In positive relationship, banks' asset quality that depends on the growth cycle and non-performing loans that relates to the default risk would be larger in downturns than in upturns. While in negative relationship, as higher GDP growth would mean that the banks are operating in a more competitive environment of interest and margins (Staikouras and Wood, 2011).

Table 1 Ratios definition

Ratios	Formulas description
ROE	Net profit after tax divided by stockholder's Equity
ROA	Total income to total asset
NIM	Interest profit divided by average earning assets
LM	Total Loans to total deposit
CA	Total Capital to total assets
AQ	Nonperforming Loans to total loans
ME	Total profit to Total operating revenue
GDPG	Gross Domestic Product Growth

Independent Variables (SSE)



Dependent Variables (SSE)



Independent Variables (SET)



Dependent Variables (SET)


Figure 1 Conceptual framework

Methodology

This study will apply the income statement and balance sheet which are from each listed bank's annual reports from 2007-2012. The data set contains 14 listed banks from Shanghai Stock Exchange, and 10 from 11 listed banks from Stock Exchange of Thailand. In particular, the "LHBANK : LH FINANCIAL GROUP PUBLIC COMPANY LIMITED" from Stock Exchange of Thailand is excluded, due to this listed bank provides annual report from 2010 to 2012, which does not meet

the required data time range that begins from 2007.

In purpose to measure banks performance, financial ratios formulas are applied for the calculation. Outcome of the calculation will be utilized onto the model specification, therefore to access the result of bank performance.

The Dependent variables used to indicate bank performance are ROE, ROA and NIM. While Liquidity, capital adequacy, asset quality and efficiency are taken as the independent variables, GDP will be external variable.

- Listed banks in Shanghai Stock Exchange

$$n_{it} = a_0 + b_1(LM_{it}) + b_2(CA_{it}) + b_3(AQ_{it}) + b_4(ME_{it}) + b_5(GDP_{CNT}) + \varepsilon_{it} \dots$$

- Listed banks in The Stock Exchange of Thailand.

$$n_{it} = a_0 + b_1(LM_{it}) + b_2(CA_{it}) + b_3(AQ_{it}) + b_4(ME_{it}) + b_5(GDP_{THt}) + \varepsilon_{it} \dots$$

Where:

- n_{it} = Performance of bank i at time t represented by ROA, ROE, NIM
- a = Intercept
- LM_{it} = Liquidity of bank i at time t
- CA_{it} = Capital adequacy of bank i at time t
- AQ_{it} = Asset quality of bank i at time t
- ME_{it} = Management Efficiency of bank i at time t
- GDP_{CNT} = Gross Domestic Product Growth of China at time t
- GDP_{THt} = Gross Domestic Product Growth of Thailand at time t
- $b_1 - b_5$ = Coefficients parameters
- ε_{it} = Error term where i is cross sectional and t time identifier

Analyze data with the statistical program.
Firstly summarize the quantitative

description of features of samples and data
(Mann, 2013).Then proceed the validity

test to exam multicollinearity and see whether there is correlation between independent variables in a regression model (Rahmawati and Hosen, 2012). Heteroskedasticity test is to see if there is different variance from the residual between observations in the regression or not (Suhardjanto, et al., 2009). Autocorrelation test is to exam whether there the correlation between the error in period t with bullies error in period t-1 (previous period) exists in the linear regression model (Rahmawati and Hosen, 2012). Finally to run the multiple regression analysis.

Results

Analysis

Analyze financial performance of listed banks on SSE and SET from 2007 to 2012. Begins with 2007, banks listed on SET performed better than banks listed on SSE, till 2009 these figures declined for both listed banks in SET and listed banks in SSE. This might be caused by the effect of the global economic crisis and its effect on Asia. Then from 2010 onward, the trend of performance for listed banks on both sides begins to increase. As overview for the average performance, it shows investment opportunity and profitability. Further, by the end of 2012, value of ROE, ROA and NIM of listed banks in SSE and banks in SET both increased to be even higher than 2007, and banks in SSE performed slightly better than banks in SET.

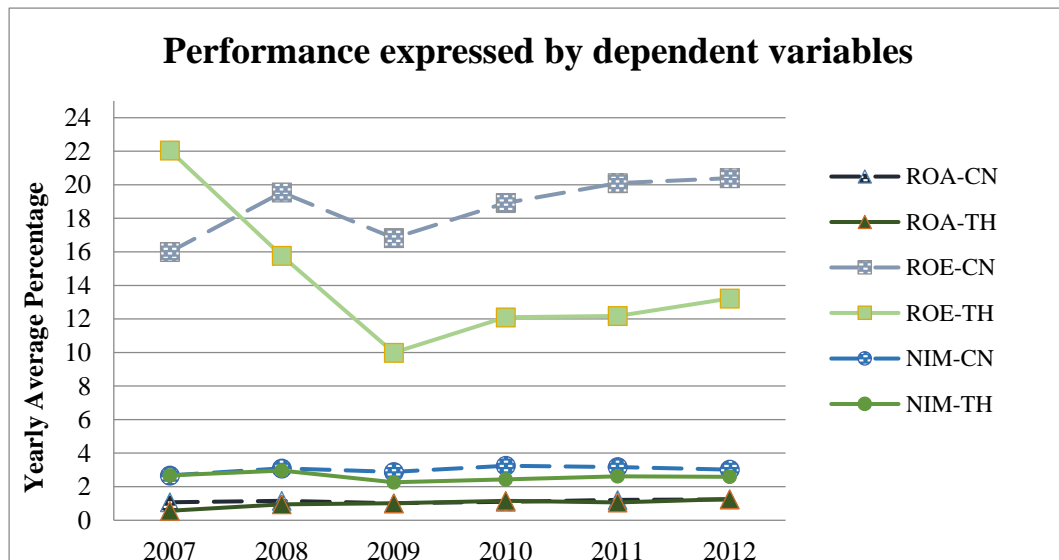


Figure 2 Performance expressed by dependent variables

Description Statistics provides mean score of ROE, ROA and NIM. It states the listed banks on Shanghai Stock Exchange perform slightly better on return on equity and return on assets than those on the Stock Exchange of Thailand. While banks on SET earn higher net income margin than banks on SSE.

Mean score of liquidity for listed banks on SSE is lower than banks listed on SET, listed banks on SSE have higher ability to

repay depositors' funds redemption, and on the other hand with higher liquidity. Mean score of capital adequacy states lower than those on SET, with lower profit, the higher score represents less risky investment preference. Asset quality states listed banks on SSE are with lower credit risk. The last internal independent variable is management efficiency, it states banks listed on SSE higher operating better than and those on SET.

Table 2 Description statistics

Variables	Location	MAX	MIN	MEAN	MEDIA N	Std. DEV	Obsn
ROE	SSE	30.01	-6.02	18.63	18.86	4.92	84
	SET	227.20	-96.00	14.67	12.32	32.38	60
ROA	SSE	2.53	0.41	1.13	1.14	0.29	84
	SET	3.26	-6.36	1.05	1.06	1.15	60
NIM	SSE	3.42	1.82	2.59	2.59	0.37	84
	SET	5.07	0.45	2.95	3.07	0.92	60
LM	SSE	85.11	50.84	68.64	70.94	6.95	84
	SET	128.36	57.76	94.81	94.74	11.94	60
CA	SSE	26.51	0.00	12.20	11.97	3.20	84
	SET	18.20	1.48	14.58	15.18	2.54	60
AQ	SSE	23.57	0.38	1.57	1.10	2.56	84
	SET	18.59	2.10	6.84	4.90	4.57	60
ME	SSE	77.56	18.49	47.31	49.13	9.77	84
	SET	222.05	1.19	38.89	36.26	28.31	60
GDPG	SSE	14.16	7.70	10.08	9.47	2.01	84
	SET	7.80	2.30	3.47	3.75	3.79	60

From the observation in table description statistics above, mean score of ROE, ROA and NIM during 2007 – 2012 is 18.63, 1.13 and 2.59 on SSE, while 14.67, 1.05 and

2.95 on SET respectively. It shows that the listed banks on Shanghai Stock Exchange perform slightly better on return on equity and return on assets than those on the Stock



Exchange of Thailand. While banks on SET earn higher net income margin than banks on SSE.

From that table, it shows the data on description statistic of the factors that independently affect the performance of the listed banks on Shanghai Stock Exchange and on the Stock Exchange of Thailand as well.

As seen from the table, mean score of liquidity for listed banks on SSE is 68.64, which is lower than 94.81 for banks listed on SET. It indicates the percentage of using depositors' funds on lending. With regarding to the "loans to deposit" ratio definition, listed banks on SSE have a higher ability to repay depositors' funds redemption, and on the other hand with higher liquidity.

Mean score of capital adequacy states at 12.20 for banks listed on SSE, and 14.58 for those on SET. With a lower profit, the

higher score represents less risky investment preference. An asset quality is stated at an average of 1.57 and 6.84 for banks listed on SSE and SET respectively, as the percentage of non-performing loans out of total loans, listed banks on SSE are with lower credit risk. The last internal independent variable is management efficiency, its mean score is at 47.31 and 38.87 for banks listed on SSE and SET. The percentage of operating profit to total income, can be used to show the wellness of the banks' operating function.

Validity test outcome

Validity test found that there is no multicollinearity problem in the regression equations. Multicollinearity is tested with correlation coefficients. Absolute Correlation coefficients above 0.8 among variables indicates the multicollinearity.

Table 3 Correlation among independent variables

Variables SSE	LM	CA	AQ	ME	GDPG
LM	1				
CA	-0.323	1			
AQ.	-0.171	-0.394	1		
ME	-0.139	0.443	-0.168	1	
GDPG	-0.030	-0.022	0.367	-0.182	1
Variables SET	LM	CA	AQ	ME	GDPG
LM	1				
CA	0.411	1			
AQ	-0.045	-0.361	1		
ME	0.152	0.042	0.136	1	
GDPG	0.049	-0.007	-0.109	-0.026	1

The absolute correlation among the independent variables of banks listed on SSE and SET are all below 0.8, hence, there is no existence of serious multicollinearity problems.

On the other hand, the multicollinearity can be tested by an observation on the VIF

value. According to Gujarati (2004), VIF above 10 indicates to the problem of the multicollinearity. According to table of variance inflation factor of variables below, data shows that there is no existence of multicollinearity.

Table 4 Variance inflation factor of variables

Variables	VIF	
	SSE	SET
Liquidity	1.28	1.25
Capital Adequacy	1.81	1.41
Asset Quality	1.61	1.21
Management Efficiency	1.30	1.05
GDP Growth	1.25	1.02

However, there is existence of either or both Heteroskedasticity and Autocorrelation. Heteroskedasticity and autocorrelation test are based on the original multiple regression model equations of listed banks on the Shanghai Stock exchange and the Stock Exchange of Thailand. In purposes to solve the problems, equation estimation will be progressed on least squared with consistent coefficient of Newey-West.

Relationship between dependent and independent variables

This section states briefly about the relationship among dependent and independent variables, and their relationship with the bank performance expressed by ROE, ROA and NIM. The coefficients in between each explanatory and explained variables shows the measurement and trend of the relationship, which can be strong, weak, positive or negative.

A higher value of the coefficient refers to a stronger relationship, while a lower value indicates a weaker one. A positive score presents the positive relationship, then a negative score means the opposite.

Table 5 Correlation coefficient among variables of SSE

SSE	ROE	ROA	NIM
LM	0.240290	-0.147069	0.089814
CA	0.077746	0.680808	-0.005382
AQ	-0.610298	-0.145005	0.099295
ME	0.320886	0.646932	-0.195588
GDPG	-0.252952	-0.138739	0.076591

Table 6 Correlation coefficient among variables of SET

SET	ROE	ROA	NIM
LM	-0.437518	-0.126502	0.286931
CA	-0.684715	-0.087617	0.337392
AQ	0.046958	-0.397164	-0.641846
ME	-0.444574	-0.622710	-0.031055
GDPG	0.037587	0.019182	0.026148

Coefficient of Liquidity from banks listed on SSE shows positive relationship between ROE and NIM while negatively related to ROA, and on SET there is only NIM related positively. However, by observing the Capital Adequacy part, variables are positively related to the ROE and ROA, but negatively to NIM on SSE, especially to ROA the most strongly, and less strongly to ROE, then to the NIM. This might state that the banks meet no uncertainty on earnings due to leverage. But on SET, Capital Adequacy shows the negative relationship between ROE and ROA, then strongly relates to ROE, but for

NIM it states positive and second strong relationship. This might indicate that it is safe assets investment preference for high Capital Adequacy.

Assets Quality as the percentage of non-performing loans out of total loans, represents the banks credit risk level. On SSE, correlation coefficient shows negatively to ROE, ROA and positively to NIM. The higher the ratio is, the more poor banks perform. The correlation is strong with ROE. It might be because the loans are fixed with the largest percentage of assets which earn from the equity. On the other side, Assets Quality on SET

correlates to ROE positively, then negatively to ROA and strongly to NIM. This might be due to the fact that banks listed on SET prefer lower non-performing loans percentage by decreasing the income from assets.

Management Efficiency is another explanatory variable. It is related to ROE and ROA positively, then to NIM negatively for banks listed on SSE, however, it is negatively related to ROA strongly of banks listed on SET. This, from another point of view, indicates that banks try to low down the non-performing loans percentage by sacrificing operating income amount.

The external variable would be the Gross Domestic Product Growth which from the table shows negative relationship between ROE and ROA, then a positive relationship with NIM for banks listed on SSE, but shows positive relationship among all explained variables of banks listed on SET. This kind of relationship is mixed. When it shows negatively and strongly with banks listed on SSE, and positively and weakly with banks listed on SET.

Regression result

Regression result proves hypothesis, that Liquidity, Capital Adequacy, Assets

Quality or Management Efficiency affects the performance of banks listed on SSE and SET. The result presents that Capital Adequacy, Assets Quality and Management efficiency affect banks listed on SSE and SET significantly. For hypothesis H7, that GDP Growth affects listed banks performance as external factor, which is proofed as well. As there the GDP Growth significantly and negatively effects performance of banks listed on SSE.

Capital Adequacy, Assets Quality and Management Efficiency are significantly related to performance expressed by ROE of bank listed on SSE. For model ROA, Capital Adequacy, Assets Quality and Management Efficiency are significant. While on model NIM, there only the Asset Quality states at the significant level. However, on SSE the Liquidity management was found to be non-significant.

On the other side, model ROE of banks listed on SET owns Capital Adequacy, Assets Quality and Management Efficiency as significant. Then for model ROA, there the Assets Quality and Management Efficiency state significantly. On model NIM, there only the Assets Quality presents significant relationship. While the Liquidity management was still found to be non-significant.

Table 7

Variables / SSE	Model 1 (ROE)	Model 2 (ROA)	Model 3 (NIM)
Constant	13.34167 (1.872332)	-0.470538 (-1.081538)	2.127812 (3.340441)*
LM	0.047199 (0.540725)	0.006771 (1.625283)	0.008607 (1.164603)
CA	-0.520760 (-3.593680)*	0.060356 (3.625773)*	0.026740 (1.342171)
AQ	-1.331417 (-10.57728)*	0.029874 (3.849468)*	0.026982 (2.062466)*
ME	0.188795 (2.644162)*	0.011920 (3.409544)*	-0.009510 (-1.942228)
GDPG	0.155414 (1.067347)	-0.020829 (-2.2029910)*	-0.004892 (-0.200338)
R ²	0.516627	0.661688	0.077998
Adjusted R ²	0.485642	0.640002	0.018896

Externally, GDP Growth as macroeconomic variable is stating significantly related to performance expressed by ROA of banks listed on SSE only.

Table 8 Regression output adjusted with consistent coefficient of Newey-West.

Variables / SET	Model 1 (ROE)	Model 2 (ROA)	Model 3 (NIM)
Constant	191.7115 (4.167668)*	3.810329 (3.417392)*	1.969969 (2.105147)*
LM	-0.298020 (-1.161441)	0.003226 (0.300323)	0.019929 (1.775872)
CA	-8.619944 (-3.287494)*	-0.100873 (-1.454577)	-0.000269 (-0.007499)
AQ	-1.042657 (-2.437676)*	-0.100976 (-2.691846)*	-0.128624 (-4.602928)*
ME	-0.435212 (-4.145226)*	-0.022912 (-2.543214)*	0.000577 (0.210080)
GDPG	0.274371 (0.467549)	-0.003916 (-0.197556)	-0.013684 (-0.919118)
R ²	0.674913	0.525417	0.482167
Adjusted R ²	0.644812	0.481474	0.434220

- Coefficient states above
- T-Statistics states in the parentheses
- Significant states with “*”

From observation, data can prove hypotheses, that Liquidity, Capital Adequacy, Assets Quality or Management Efficiency affect the performance of banks listed on SSE and SET. The result shows that Capital Adequacy, Assets Quality and Management efficiency affect banks listed on SSE and SET significantly. For hypothesis H7, GDP Growth affects listed banks performance as external factor which is proofed as well. As the GDP

Growth has significant and negative effects on performance of banks listed on SSE.

To be more specific, the T-Statistic value of model ROE of banks listed on SSE with Liquidity, Capital Adequacy, Assets Quality and Management Efficiency are 0.54, -3.59, -10.58 and 2.64 respectively. These present Capital Adequacy, Assets Quality and Management Efficiency are significantly related to performance



expressed by ROE of bank listed on SSE at a minimum confidence level of 95%. For model ROA, these four explanatory variables stated with 1.63, 3.63, 3.85 and 3.41, this means Capital Adequacy, Assets Quality and Management Efficiency are significantly related to performance expressed by ROA of bank listed on SSE. While for model NIM, there is only the Asset Quality showing at the significant level. However, on SSE the Liquidity management was found as non-significant.

On the other side, model ROE of banks listed on SET, T-statistic value of the explanatory variables stated at -1.16, -3.29, -2.44 and -4.15 respectively, this result indicates that the Capital Adequacy, Assets Quality and Management Efficiency are significantly related to performance expressed by ROE of bank listed on SET. Then for model ROA, the Assets Quality and Management Efficiency show significantly at -2.69 and -2.54. Similar to banks listed on SSE, on model NIM, only the Assets Quality with T-statistic value -4.60 presents the significant relationship. While the Liquidity management is non-significant.

Externally, GDP Growth as macroeconomic variable is shown at 1.067, -2.202 and -0.200 for T-statistic value with ROE, ROA and NIM of banks listed on SSE, then -0.198, -0.0.200 and -0.919 with dependent variables of banks listed on SET, So it is found as significantly related to performance

expressed by ROA of banks listed on SSE only.

Conclusion and discussion

Conclusion

The objective of this study is to examine the factors that determine performance of listed banks on Shanghai Stock Exchange and The Stock Exchange of Thailand.

With purpose to achieve the objective, six years panel data for total 24 listed banks was analyzed with multiple regression models. In order to see the effects across year and banks, panel data is utilized. During the analysis, factors that determine listed banks performance expressed by ROE, ROA and NIM were tested. The Capital Adequacy, Assets Quality and Management Efficiency are found to be significantly affecting listed banks performance expressed by ROE, ROA and NIM.

This study owns the Capital Adequacy, Assets Quality and Management Efficiency as significant factors to the performance expressed by ROE of listed banks on SSE. The effectiveness level from high to low ranks as Assets Quality, Capital adequacy then Management Efficiency. However, for banks listed on SET, there the variables exist as Capital



adequacy, Assets Quality then Management Efficiency.

Discussion

Such so, for banks listed on SSE. Capital adequacy states negative relationship in model ROE which stands in line with Flamini et al. (2009) and Staikouras and Wood (2011), while positive in model ROA supports Berger (1995) and Tan and Floros (2012). Assets Quality states most strong and negative correlation coefficient with ROE, and positive with ROA and NIM, hence, while the non-performing loans percentage increases, the return on assets increases. This might be listed banks in SSE tend to utilize a part of the loans to promo the total income by generating assets, and in such concern, while total asset remains, the outcome is with higher percentage but anyway in such situation the risk increases as well. Management efficiency states significant and positive relationship to the bank performance expressed by ROE and ROA. This presents banks listed on SSE generate the operating revenue well as a part of the total income.

Capital adequacy presents significant and negative relationship with performance expressed by ROE listed on SET, supports the point of Dietricha and Wanzenried (2009). Assets Quality states negative correlation coefficient with ROE, ROA and NIM, hence, while the non-performing loans percentage increases, the return on

equity or asset, as well the net income margin decrease. This result supports the point that Asset Quality correlated to bank performance negatively along with Ongore and Kusa (2013), Dang (2011) and Sangmi and Tabassum, (2010). Management efficiency states significant and negative relationship to the bank performance expressed by ROE and ROA. This might be due to the banks internal management decision and strategy, that after the financial crises, investors realized it's more important to look at ability withstand finance shocks, by reducing the interest rate to gain more investment and borrowing, which helps to enlarge the revenue meanwhile increases assets and decreases the non-performing loans amount, hence ROE and ROA are increased.

Liquidity presents no significant relationship with either listed banks performance on SSE or SET. With standing in line with Said and Tumi (2011) and Ongore and Kusa (2013).

Then, it's to conclude that for banks listed on SSE, the ones with lower capital ratio and non-performing loans ratio, or higher total operating revenue to total profit gains more return on equity. These variables are found to be positively related to ROA, and positively related to the NIM as well. For banks listed on SET, those own lower Capital adequacy, Assets Quality then Management Efficiency ratios again higher return on equity and asset, while the



ones with lower non-forming loans percentage earn more net income margin.

Limitation and recommendation

This study only groups banks listed on SSE and SET as samples. However, does not involve all the listed banks in China. There is the “Shenzhen Stock Exchange” as another stock exchange in mainland China not involved. Therefore, further research can be proceed with sampling the listed banks on "Shenzhen Stock Exchange" as it is the another stock exchange in mainland China. In order to understand whether there would be different regression outcome for listed banks in different stock exchange while in the same country and economy.

In this study, independent factors were selected based on CAMEL rating system (Dang, 2011) and macroeconomic variable involved GDP growth only. The further research can utilize other bank specific factors and inflation as macroeconomic variable, in order to find the main factors to develop the model.

As per the regression output and statistics, recommendation would refer the significant factors and their correlation with the dependent variables.

For investors investment preferences decisions. A bank with lower capitalization could be more able to catch the potential

profitable trading opportunities, which benefits investors with the higher return from investment. A bank with relatively lower non-performing loans percentage means higher stability and lower risk, which benefits investors with more stable invest environment. A bank with relatively higher operating profit percentage means higher ability the bank can arrange investor's funds to generate income, which benefits investors with higher profit. A bank can survive in the a competitive environment means that bank made correct decisions, and can benefit investors more than banks operate in a less competitive environment. Further, investors do not have to consider the liquidity as it is not affecting the bank performance significantly. Investments can be considered on banks listed on SSE as they own relatively higher value of ROE and ROA while comparing with banks listed on SET, so it means banks listed on SSE are more profitable and the investment will be with higher return.

For bank management implications. As the performance of Banks listed on SSE is strongly and negatively correlated to the Asset Quality, banks could consider to further increase the loans amount in purpose to increase loan portfolio quality, which could further attract investments and enlarge the return on equity. For the other side, banks listed on SET might consider to focus more on the Capital Adequacy as it is strongly and negatively



relates to bank performance. Banks could manage to catch more investments opportunities which could gain profit, and provide more return on shareholder's equity. And the higher benefit to shareholders would as well attract more investments. Therefore, banks are to: Firstly, catch more potential trading opportunities with their capitalization. Which would provide the investors with higher return on their investments, meanwhile build up reputation of banks then further attract more investments which contributes to the improvement of the sources of funds. Secondly, increase the operating profit by reducing the operating cost, in order to lowering the chances that incurring bank failure in incidents. Which would represent the management efficiency in operating banks then further gain the investors' confidence. Thirdly, lower the non-performing loans percentage as it is the risk that might lead to bankrupt throughout economic changes. The raise of non-performing loans will increase banks operation difficulties by affecting on their utilization of total loans.

Lower the loans risk, higher the sustainability of banks while the economic shrinks.

However, this research limits by only studying sample groups of banks listed on SSE and SET. However, it does not cover all the listed banks in China. There is the "Shenzhen Stock Exchange", another stock exchange in mainland China which is not covered. Therefore, for further research, it can be processed with sampling the banks that listed on "Shenzhen Stock Exchange" which is another stock exchange in mainland China. In order to understand whether there will be a different regression outcome for listed banks in different stock exchange market, while in the same country and economy.

In this study, independent factors were selected based on CAMEL rating system (Dang, 2011) and macroeconomic variable involved GDP growth only. The further research can use other bank specific factors and inflation as macroeconomic variables, in order to find the main factors to develop the model.

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Factors influencing customer satisfaction and brand loyalty of top 5 express delivery service in China

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Abstract

The purpose of the study was to investigate the effect of service quality and brand image on customer satisfaction, and the effect of customer satisfaction on brand loyalty of Top 5 express delivery service in China. Taobao merchant in China were respondents. There were 400 qualified questionnaires were used in this analysis. The personal data is analyzed with descriptive statistic analysis and crosstabs analysis. The data is analyzed with mean and standard deviation analysis. The multiple regressions analysis are used to examine the postulated hypothesis. The finding indicated both service quality and brand image had direct positive effect on customer satisfaction, and customer satisfaction had direct positive effect on brand loyalty of Top 5 express delivery service in China. If they plan to improve service quality or brand image, it would be more beneficial to enhance customer satisfaction and brand loyalty. Therefore, this research could be useful information for express delivery service companies managers in an environment of keen competition.

Keywords: Express delivery service, Service quality, Brand image, Customer satisfaction, Brand loyalty



Introduction

Express industry is a new industry born in United States in late 1960s. It provided documents' and goods' delivery service through the network, mostly in the form of practical delivery, with its nature tend to material flow, close to transportation and modern logistics. Express industry is the product of market economy development and highly developed modern productive forces. With technological progress and social division of labour deepening, express industry has developed into an independent industry. The purpose of express industry is to meet the personalized needs on the basis of market competition. Express industry provides additional personalized services and implements differentiating and competitive pricing policies (Zhao Jing, 2012).

In 2014, China surpassed the United States to become the world's largest express delivery country for the first time in terms of workload. Since 2015, the industry has continued to maintain a rapid growth trend. From January to May in 2015, Chinese express delivery enterprises completed deliveries of 6.81 billion mails and parcels, jumping by 42.7% year on year. Revenue from these deliveries footed up to RMB96.95 billion, up 31.9% year on year. Wherein, revenue generated by intra-city business reached RMB13.63 billion, climbing by 51.1% year on year; the inter-

city business revenue hit RMB53.29 billion, presenting a year-on-year rise of 30.2%; the revenue from the business with foreign countries, Hong Kong, Macao and Taiwan increased by 17.5% year on year to RMB14.04 billion (reportlinker).

In addition, although the volume of business is the number one in the world, an embarrassing fact can not be ignored: The sum of annual revenues from various Chinese express delivery companies still cannot compare to one of the UPS, FedEx or other foreign express delivery giants. Domestic express delivery business in terms of fixed asset size, degree of information technology, human resource level are also relatively backward (chinabgao). In 2013, major express delivery companies have maintained good momentum. Among the 20 main express delivery brands countrywide, business volume of the top ten companies are EMS, SF, STO, YTO, ZTO, YUNDA, TTK, BEST, ZJS, GTO. Their total business volume compared to the total of express business volume amounted to 87%. In year 2015 China's express delivery service satisfaction rankings, the top 5 express deliveries are ranked as follow: SF, ZTO, YTO, STO and EMS. (56lem.com). These 5 express delivery companies are China's top representative of express delivery service companies. However, the research has focused on factors influencing customer satisfaction and brand loyalty of Top 5 express delivery service in China.

Objectives of the study

1. To study the effect of service quality on customer satisfaction of Top 5 Express delivery Service in China.
2. To study the effect of brand image on customer satisfaction of Top 5 Express delivery Service in China.
3. To study the effect of customer satisfaction on the brand loyalty of Top 5 Express delivery Service in China.

Literature review

Service quality

Lehtinen believes that service quality is a subjective concept. When consumers evaluate a service at the start before they accept it, they will develop an expectation on the service. If the service is able to achieve this expectation, a feeling of satisfaction will be generated. Otherwise, it will generate discontent. When consumers develop their standards in service, they actually compare service with a practical situation, compare the two, and evaluate the standard of service quality. He also differentiates services into two aspects, namely the process and outcome, and assess the different effects of these two aspects on consumer perception. His research also have had a profound impact on the later scholars who have adopted his views. It is also due to the results of his

research and this point of view, that common product quality product sales differentiated the quality of service in the field of marketing services. (Lehtinen, 1982).

Brady and Cronin (2001) developed a multi-level, multi-dimensional service quality model. In this model, the dimensions of service quality comprised of process quality, physical environment quality and outcome quality composition. Among them, the process quality of service quality, namely service staff's attitude, behavior and professionalism of service delivery process, had the greatest impact on customer to measure service quality.

Service Remedy is the best way to save the service failure and it is built on the basis of service failures. In an event of service failures by express delivery companies such as delivery errors, damage, loss. etc, service remedy should take effective measures to alleviate the negative effects that may occur. Service remedy refers to in the course of providing services to customers by service employees. A prosthetic and save behaviour occurs when customers complaint in an event of service failures. Appropriate and timely remedies, sincere service, proactive service remedy behaviour can be adopted to reduce customer dissatisfaction, effectively resolve conflicts and avoid service crisis. These measures will lead to customer satisfaction and loyalty, establish a strong



corporate image and thus enhance the prestige of these companies. (Chao Wang, Lijie Yang and Yisheng Liu, 2012)

In this study, according to the process of service occurred and combined with the related research literature review by international scholars of the service quality and logistics service quality, the service quality of express enterprises are divided into three dimensions: service process quality, service outcome quality and service remedy quality.

Brand image

Research on definition of brand image begun in the 1950s. In 1955, Gardner and Levy proposed the concept of brand image in their classic article. In the article, they think the brand image is an important concept in marketing, which have a significant impact on consumers' purchasing decisions (Gardner and Levy, 1955). But this definition of brand image has not yet been agreed in the academic field (Dobni & Zinkhan, 1990). Brand image is the consumer's feelings or impressions to the brand's general characteristics (Jain & Etgar, 1976). Brand image is the people's perception of the brand (Bullmore, 1984). The concept of the image can be applied to the product as it not just describes the features or quality of the product, but also the overall impression of actual product in other people's minds (Dichter, 1985). Brand

image is not just a perception phenomenon that is generated through the company's communications activities. It is the brand understanding that consumer refined from all the activities that the company participate in which they associated with. The image is the perception generated by marketer's administration to the brand, in theory any product will be able to position as functional, symbolic or empirical image (Park, 1986). Brand image is the consumer's rational or sensuous perception for a particular product (Dobni & Zinkhan, 1990). Brand image is the brand perception produced by the memory of the consumer about brand's association. It is one of the constituent elements of brand equity, reflecting the value of the product in the minds of consumers (Keller, 1993). Brand image is a set of attributes and association when the consumers think of the brand name (Biel, 1993). Brand is the consumer's perception of the overall brand, which is an important part of consumer's information processing (Blawatt, 1995).

Park divided the properties of brand and image into three types: functional, symbolic and emotional. These two concepts are combined and it can be considered that in his opinion the brand image has three dimensions, namely, functional attributes, symbolic attributes and emotional attributes among which, the functional attributes related to the specific needs of customers, focused on



emphasizing the use value that provided by the product or the services, symbolically attributes refers to meet the customers' demand on their self-improvement, the role of status, group memberships, self-identity, and other aspects of demand. Experience attributes refers to meeting the consumers' demand of approaching or exceeding expectations, such as diversity, irritation, etc. (Park, 1986)

In this study, service brand image considered consist of functional, emotional and symbolic factors.

Customer satisfaction

As an early researcher on customers' satisfaction in traditional areas, Oliver (1980) proposed the theory of "expectation inconformity", which is the customers' feel of satisfaction when the services actual performances are beyond their expectations. On the other hand, when the services actual performances fall under their expectations, customers will feel dissatisfied. During the last decade, satisfaction has been considered as one of the most important theoretical as well as practical issues for most marketers and customer researchers (Jamal, 2004). Kotler and Keller (2006) proposed that, "satisfaction is a personal feeling of satisfaction or dissatisfaction resulting from comparing service performances in relation to his or her expectation."

Brand loyalty

In 1923, the concept of brand loyalty was first proposed by Copeland. In later studies, different definitions were given by different scholars. For example, Jacoby (1978) defines brand loyalty as a tendentious (not random) behavioral response (purchase). This definition undertakes the form of consumers always choosing one or a few brands among numerous of them after a long time.

Baldinger and Robinson (1996) points out that the brand loyalty should include two dimensions, namely attitude loyalty and behavior loyalty. The single view of attitude has no sufficient understanding of brand loyalty. Behavior loyalty and attitude loyalty should be combined, namely the complex loyalty theory. Later, scholars added time and process factors on the basis of composite loyalty. Combined with the related research literature review of brand loyalty, in this study, divide the brand loyalty in into two dimensions: attitude loyalty and behaviour loyalty.

Conceptual framework

The conceptual framework in this study was modified from the conceptual framework of Brady and Cronin (2001), Chao Wang, Lijie Yang and Yisheng Liu (2012), Park (1986), Wang, Zhang Zhen, Tian Maoli (2007), Baldinger and Robinson (1996). The independent

variables were service quality and brand image. The dependent variables were customer satisfaction and brand loyalty. All independent variable was drawn into

the conceptual framework of this study together with the dependent variable, so the conceptual framework of this study was presented in the following model:

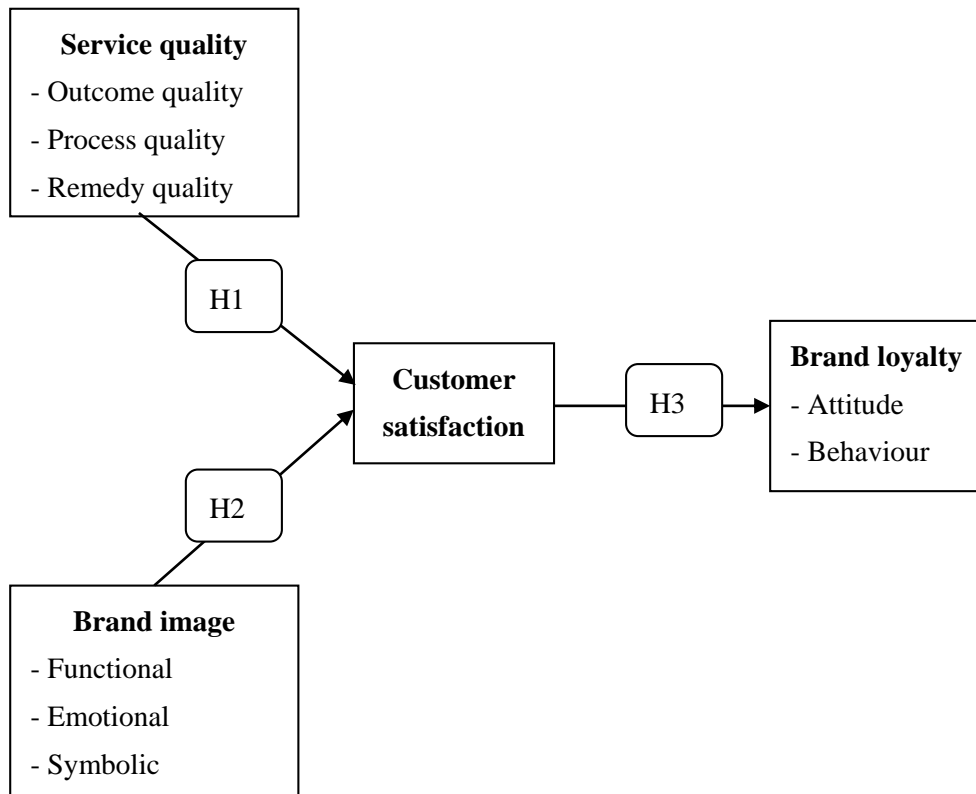


Figure 1 Conceptual frameworks

Hypothesis

This study seeks to find the answers for the following research questions;

Q1: How is the service quality effect on customer satisfaction of Top 5 Express delivery Service in China?

Q2: How is the brand image effect on customer satisfaction of Top 5 Express delivery Service in China?

Q3: How is the customer satisfaction effect on the brand loyalty of Top 5 Express delivery Service in China?

The answer the mentioned questions, the



following hypothesis are set;

Hypothesis 1: Service quality has positive affect on customer satisfaction.

Hypothesis 2: Brand image has positive affect on customer satisfaction.

Hypothesis 3: Customer satisfaction has positive affect on brand loyalty.

Methodology

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

When e = deviation of random sampling

N = number of population unit

N = size of sampling population

Set sampling deviation to 0.05 therefore

$$\begin{aligned} n &= 6000000 / [1 + 6000000 (0.05)^2] \\ &= 399.973 \end{aligned}$$

$$N = 399.973 \text{ rounded up to } 400$$

Consequently, the sample size comes to 400 respondents

Sampling design

The population examines factors influencing customer satisfaction and brand loyalty of private express service in China. The total number of Taobao merchants in China are about 6000000 (digi.163.com), and the number of samples are calculated based on the from the number of population using the formula of Yamane (1973).

Research instrument

In this study, the research instrument to collect data is the questionnaire. It composes of two parts:

Part 1: This part gains the information of the respondent. There are 8 questions,

including the gender, age, education level, income/per month, online store ages (year), sales quantity/per month (piece), name of the express delivery company and type of products.

Part 2: Constructs and questions included in the questionnaire. The second part is



related to the service quality, brand image, customer satisfaction and brand loyalty. There were 38 questions in this part.

Data collection

Data for this research is collected through questionnaires from May 2015. 400 questionnaires are collected by random sampling from Taobao merchants. The 100 questionnaires are collected by interviewing the store owners on Taobao or not. The 100 questionnaires are collected from the shop owner who was doing business on Taobao in general shops in Nanning, China. The 300 questionnaires survey methodology is to communicate with Taobao merchants through Aliwangwang software, by requesting them to visit specific web pages to investigate or sending the questionnaire via e-mail to investigate. Aliwangwang is a free online business communication software, which allows buyers and sellers to communicate through text and voice communication online. The questionnaire will then be translated into Chinese language.

Data analysis

Five point Likert scale is one of the most reliable measurement scales and it is very popular. This scale is applied to the present study. Interval with five point scale is calculated using the following formula,

$$(5-1)/5=0.80$$

Based on the above calculation, the scores fall between the ranges of:

4.21-5.00 is considered as strongly agree

3.41-4.20 is considered as agree

2.61-3.40 is considered as neutral

1.81-2.60 is considered as disagree

1.00-1.80 is considered as strongly disagree

In the data analysis part of this study, In part 1, the personal data is collected and analyzed with descriptive statistic analysis and crosstabs analysis. In part 2, the reliability test is conducted to evaluate the items of each variable. The data is analyzed with mean and standard deviation analysis. The multiple regressions analysis are used to examine the postulated hypothesis.

Pre- test of research instrument

The pretest will present if the survey instruments are easy to understand for the respondents by evaluating the reliability of the instrument.

The reliability test is a process to indicate the correlation items in each set variables. Cronbach's alpha coefficient is the most common tool for internal consistency and reliability coefficient. Hence, Cronbach's alpha coefficient was used to measure the reliability test in this study. The cut-off



level of Cronbach's alpha should be at least 0.7 or higher 0.7 to obtain an adequate scale, and many researchers require a higher cut-off level of 0.8 to be considered as a "good scale" (Cronbach, 1951).

Therefore, the researcher was chosen 30 samples to do the pretest before testing all the 400 samples. The results of the coefficients calculated by using Cronbach's alpha score are shown as follows:

Table 1 Reliability test using Cronbach's alpha

Variable	Pre-test	Actual
Service quality		
Outcome Service	0.799	0.737
Process Service	0.716	0.746
Remedy Service	0.892	0.832
Brand image		
Functional	0.808	0.722
Emotional	0.884	0.750
Symbolic	0.870	0.820
Customer satisfaction	0.737	0.780
Brand loyalty		
Behavioural	0.782	0.810
Attitudinal	0.715	0.786

The reliability score is used for every variable in the questionnaire. If the value equal or more than 0.7 score, it means the

question has reliability or respect. Hence, all the pre-test values and actual values of all variables are more than 0.7.

Results

Table 2 Level of agreement

Description	Mean	S.D	Level of agreement
Service quality	3.8577	.46606	Agree
Outcome quality	3.8475	.60759	Agree
Process quality	3.8688	.57241	Agree
Remedy quality	3.8590	.69781	Agree
Brand image	3.7428	.50052	Agree
Functional	3.8195	.54485	Agree
Emotional	3.7170	.56294	Agree
Symbolic	3.6920	.70922	Agree
Customer satisfaction	4.0425	.64512	Agree
Brand loyalty	3.8646	.61160	Agree
Behavioural loyalty	3.9733	.71376	Agree
Attitude loyalty	3.7558	.68569	Agree

From the table 2, Outcome quality had a mean of 3.8475 and standard deviation of 0.60759, which was considered as agreeable level. Process quality had a mean of 3.8688 and standard deviation of 0.57241, which was considered as agreeable level. Remedy quality had a mean of 3.8590 and standard deviation of 0.69781, which was considered as agreeable level. For the brand image, functional had a mean of 3.8195 and standard deviation of 0.54485, which was considered as agreeable level. Emotional

had a mean of 3.7170 and standard deviation of 0.56294, which was considered as agreeable level. Symbolic had a mean of 3.6920 and standard deviation of 0.70922, which was considered as agreeable level. The customer satisfaction had a mean of 4.0425 and standard deviation of 0.64512, which was considered as agreeable level. For the brand loyalty, behavioural loyalty had a mean of 3.9733 and standard deviation of 0.71376, which was considered as agreeable level. Attitude loyalty had a

mean of 3.7558 and standard deviation of 0.68569, which was considered as agreeable level.

Analysis of the influence between service quality factors and customer satisfaction by multiple regressions.

H1: Service quality has positive affect to customer satisfaction.

Table 3 Model summary of the service quality

Model	R	R square	Adjusted square	R Std. Error of the estimate	F	Sig.
1	.531a	.282	.277	.54868	51.865	.000a

Predictors: (Constant), Service quality (Outcome quality, Process quality, Remedy quality)

Dependent Variable: Customer satisfaction

Significant level = 0.05

According to the Table 3, the relationship between service quality and customer satisfaction, considered with R Square, is 0.282. It means that the service quality factors can explain 28.2% of change of the dependent variable (customer satisfaction). Considering that Adjusted R Square value is 0.277, hence service quality factors and customer satisfaction has a strong

relationship about 27.7%. In addition, we also considered that the Sig. value is .000^a which is lower than the level of significance or the alpha level ($\alpha=0.05$) for the hypothesis test. Hence, hypothesis 1 is supported, which proves that service quality has positive affect to customer satisfaction.

Table 3.1 ANOVA of the service quality

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	54.793	34	1.612	5.287	.000
	Residual	111.262	365	.305		
	Total	166.055	399			

a. Predictors: (Constant),Service quality (Outcome quality, Process quality, Remedy quality)

b. Dependent Variable: Customer satisfaction

Significant level = 0.05

From the table 3.1 showed that the F values of ANOVA analysis is equal to 5.287 and the significant level was 0.000 which was less than the significant level of 0.05. it

means that there was significant relationship between service quality and customer satisfaction.

Table 3.2 Result of hypothesis the influence between service quality factors and customer satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.410	.233		6.062	.000
Outcome quality	.135	.048	.127	2.785	.006
Process quality	.195	.056	.173	3.498	.001
Remedy quality	.352	.044	.381	8.078	.000

Dependent Variable: Customer satisfaction

Significant level = 0.05

From the Table 3.2, The Sig. value of Outcome quality Process quality, and Remedy quality is lower than the level of significant or the alpha level ($\alpha=0.05$) for the hypothesis test. In addition, considering the value of Coefficients Beta, Remedy quality factor has the most strongly relationship with customer satisfaction at about 38.1%. The second strongest relationship is Process factor about 17.3% and the third factor is Outcome quality, which is 12.7%. All of three factors (Outcome quality, Process quality, and Remedy quality) will affect customer satisfaction.

The reasonable multiple regression equation for Customer satisfaction is

$$\text{Customer Satisfaction} = 1.410 + 0.135 (\text{Outcome quality}) + 0.195 (\text{Process quality}) + 0.352 (\text{Remedy quality})$$

Analysis of the influence between brand image factors and customer satisfaction by multiple regressions.

H2: brand image has positive affect to customer satisfaction.

Table 4 Model summary of the brand image

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.524a	.274	.269	.55166	49.880	.000a

Predictors: (Constant), Brand image (Functional, Emotional, Symbolic)

Dependent Variable: Customer satisfaction

Significant level = 0.05

Regarding to the regression analysis from the Table 4, the relationship between brand image and customer satisfaction, considered with R Square, is 0.274. It means that the brand image factors can explain 27.4% of change for the dependent variable (customer satisfaction), and this is considered with Adjusted R Square value of 0.269. Hence, brand image factors and

customer satisfaction has a strong relationship about 26.9%. In addition, the Sig. value is .000^a which is lower than the level of significance or the alpha level ($\alpha=0.05$) for the hypothesis test. Hence, hypothesis 2 is supported, which proves that brand image has positive affect to customer satisfaction.

Table 4.1 ANOVA of the brand image

	Model	Sum of squares	df	Mean square	F	Sig.
1	Regression	61.918	38	1.629	5.649	.000
	Residual	104.137	361	.288		
	Total	166.055	399			

a. Predictors: (Constant), Brand image (Functional, Emotional, Symbolic)

b. Dependent variable: Customer satisfaction

Significant level = 0.05

Table 4.1 showed that the F values of ANOVA analysis is equalled to 5.649 and the significant level was 0.000 which was less than the significant level at 0.05. It

mean that there was significant relationship between brand image and customer satisfaction.

Table 4.2 Result of hypothesis on the influence between brand image factors and customer satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.522	.216		7.061	.000
Functional	.213	.064	.180	3.330	.001
Emotional	.237	.070	.207	3.406	.001
Symbolic	.223	.048	.246	4.688	.000

Dependent Variable: Customer satisfaction

Significant level = 0.05

For the Table 4.2, The Sig. values for factors Functional, Emotional and Symbolic is lower than the level of significant for the hypothesis test and this is considered with the value of Coefficients Beta. The Symbolic factor has the strongest relationship with customer satisfaction at about 24.6%. The second strongest relationship is Emotional factor at about 20.7%, followed by the third factor Functional at 18.0%. Thus, all of three factors (Functional, Emotional, Symbolic) have influences on customer satisfaction.

The reasonable multiple regression equation for Customer satisfaction is

Customer

Satisfaction=1.522+0.213(functional)
+0.237(emotional) +0.223(symbolic)

Analysis of the influence between customer satisfaction factors and brand loyalty by multiple regressions.

H3: The customer satisfaction has positive affect to brand loyalty

Table 5 Model summary of the brand loyalty

Model	R	R square	Adjusted R square	Std. Error of the estimate	F	Sig.
1	.571a	.327	.325	.50251	193.034	.000a

a. Predictors: (Constant), Customer satisfaction

b. Dependent variable: Brand loyalty

Significant level = 0.05

Regarding to the regression analysis from the Table 5, the relationship between customer satisfaction and brand loyalty, considered with R Square, is 0.327. It means that the customer satisfaction factors can explain 32.7% of change for the dependent variable (brand loyalty) and this is considered with the Adjusted R Square value of 0.325. Hence, service quality

factors and customer satisfaction has a strong relationship of about 32.5% and this is considering that the Sig. value is .000^a which is lower than the level of significance or the alpha level ($\alpha=0.05$) for the hypothesis test. Thus, hypothesis 3 is supported, which proves that customer satisfaction has positive affect to brand loyalty.

Table 5.1 ANOVA of the brand loyalty

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.147	10	3.315	19.299	.000
	Residual	66.812	389	.172		
	Total	99.959	399			

a. Predictors: (Constant), Customer satisfaction

b. Dependent variable: Brand loyalty

Significant level = 0.05

From the table 5.1 showed that the F values of ANOVA analysis is equalled to 19.299 and the significant level was 0.000 which was less than significant level at 0.05. This

means that there was significant relationship between customer satisfaction and brand loyalty.

Table 5.2 Result of hypothesis the influence between customer satisfaction factor and brand loyalty

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.674	.160		10.489	.000
Customer satisfaction	.542	.039	.571	13.894	.000

Dependent Variable: brand loyalty

Significant level = 0.05

For the Table 5.2, The Sig. value of factor satisfaction is lower than the level of significant for the hypothesis test and this is considered with the value of Coefficients Beta. Hence, customer satisfaction factor has a strong relationship with brand loyalty of about 57.1%, and thus the customer satisfaction has positive affect to brand loyalty.

Furthermore, the value B of customer satisfaction value is 0.542, meaning when customer satisfaction value increases by 1 unit, the brand loyalty will increase by 0.542 units.

The reasonable multiple regression equation for Brand loyalty is Brand Loyalty=1.674+0.542(customer satisfaction)

Table 6 The summary of hypothesis testing result

Description	Result
H1: service quality has positive affect to customer satisfaction. The outcome quality, process quality, and remedy quality factors have relationship with the customer satisfaction.	supported
H2: brand image has positive affect to customer satisfaction. The functional, emotional, and symbolic factors have relationship with the customer satisfaction.	supported
H3: customer satisfaction has positive affect to brand loyalty. The customer satisfaction factors have relationship with the brand loyalty.	supported

From the table 6 it was showed that result of all the hypothesis were supported.

Conclusion

The relationship between service quality and customer satisfaction (Hypotheses1)

The hypotheses aimed to identify the service quality factors (outcome quality, process quality and remedy quality) and their positive affects to customer satisfaction. According to the result of the tests of hypotheses showing the

relationships between service quality and customer satisfaction, service quality factors and customer satisfaction has a strong relationship about 27.7%. Thus, the service quality has positive affect to customer satisfaction. Hence, when customers are using the express delivery service, customers would get higher satisfaction if they received better service quality,



The relationship between brand image and customer satisfaction (Hypotheses 2)

The hypotheses aimed to identify the brand image factors (functional, emotional, and symbolic) which have positive affect to customer satisfaction. According to the result of the tests of hypotheses showing the relationship between brand image and customer satisfaction, the brand image factors and customer satisfaction has a strong relationship about 26.9%. Thus, the brand image has positive affect to customer satisfaction and if express delivery company can build a better brand image for customers, customers would get higher satisfaction.

The relationship between customer satisfaction and brand loyalty (Hypotheses 3)

The hypotheses aimed to identify the customer satisfaction factors has positive affect to brand loyalty. According to the results of the tests of hypotheses showing the relationship between customer satisfaction and brand loyalty, the customer satisfaction factors and brand loyalty has a strong relationship about 32.5%. Thus, the customer satisfaction has positive affect to brand loyalty and if customers are not satisfied with the express delivery company, they will choose other express delivery companies.

Discussion

Service quality Based on the literature review, three American experts and scholars, referred PZB (1985) believe that service quality is the result of comparison between the actual and expected. Service quality of the logistics industry is not only an aspect of the evaluation, it also should include entity delivery quality and quality of marketing services, which is the delivery quality of goods and the customer perception of service quality respectively. Only if the two aspects were of high quality, good logistics service and high-quality logistics services will prevail. (Wang Lei, Meng hai, 2006). From the analysis result, it was found that as for outcome quality, the respondents paid more attention to whether order delivery is convenient or not. For process quality, it was found that respondents paid more attention to the service times which express delivery company offer. For the remedy quality, it was found that respondents pay more attention to whether express delivery company service hotline was unimpeded or not.

Brand image Brand image is the consumer's perception and overall view of the brand and it is reflected by the brand association exists in the minds of consumers which is a key driving factor to brand equity (Fan Xiucheng, Chen Jie, 2002). Brand image is the brand's overall perception of the people, as a cognitive



concept, and it is an important part of consumer's information processing (Jiang and Cao, 2003). For functional, the respondents paid more attention to Express delivery brand to provide delivery process timely tracking and tracing services. For emotional, it was found that respondents pay more attention to Express delivery brand service commitment to ensuring high delivery standards. For the symbolic, it was found that respondents pay more attention to the characteristics of Express delivery brand.

Customer satisfaction Based on the literature review, Oliver (1980) proposed the theory of "expectation inconformity", which proved that customers will feel satisfied when the services actual performances are beyond their expectations. On the other hand, when the services actual performances are under their expectations, customers will feel dissatisfied. During the last decade, satisfaction has been considered as one of the most important theoretical as well as practical issues for most marketers and customer researchers (Jamal, 2004). Kotler and Keller (2006) proposed that, "satisfaction is a personal feeling of satisfaction or dissatisfaction resulting from comparing service performances in relation to his or her expectation." For customer satisfaction, the respondents paid more attention to whether the delivery process makes you satisfied. and overall whether you're satisfied with the Express

delivery company.

Brand loyalty Based on the literature review, service brand loyalty means brand loyalty in the service industry, namely, consumers' brand loyalty to one of the services provided by the service enterprise, referred to as service loyalty. In the early days of the study, Jacoby (1978) argued that service loyalty is a customer behavior, he saw whether customers continuing to purchase a certain service as an important measure of loyal service. The brand loyalty factors are consisting of two dimensions, which are behavioural loyalty and attitude loyalty. From the analysis result, it was found that as for behavioural loyalty, if the respondents are satisfied with the express delivery company, when they need express delivery service in the future, they will take this express company as the preferred. For attitude loyalty, if the respondents are satisfied with express delivery company, they would think that this express delivery company is repeatedly of better quality than other express delivery company. Thus, although there are other alternatives for express delivery companies, they still prefer to this express delivery company.

Implication

Service quality Managers should develop a more convenient way to order delivery, such as the development of application, where customers can fill in their own address detailed information and



the agreed time, and also customer and courier can know the position of each other via GPS. In this era of network information, as more people began to use online applications, customers can give their assessment and recommendations of every service through applications. In addition, companies also can reduce manpower expenditures while have a better understanding of customer needs and employees when they are given the service outcome. Meanwhile, the company should hire more staffs familiar with network operations, as they will be better equipped to pass customer order information to the courier. At the same time, stringent requirements can ensure that the courier arrives at the agreed place within the specified time to receive goods or not via application. In addition, the company should be educated to ensure that a safe system for customer's goods is in place, in order to improve the quality of couriers. Finally, companies should look for ways to reduce unnecessary costs and improve the outcome quality, thus giving the customer a reasonable price. Also when hiring couriers, human resource department should place more focus on the courier's personality and hire couriers who have good communication with customers. Training and assessment should be conducted on a regular basis for couriers to ensure that they are skilled enough to master professional knowledge. And managers should develop more ways of providing after-sales service, such as an

opening of after-sale service exclusive line which can allow customers to contact the company quickly and easily when service problems arise, or through applications from which customers can submit the issue during the service.

Brand image Managers should provide convenience service to customers in all aspects of service, and pay attention to the efficiency of each service process. Couriers training can be conducted for easier and more convenient placing of orders. Positive express delivery of goods in the process of tracking inquiries and timely notice to customers should be in place to guarantee quality and safety of each service and this service can give customers a responsible good image. At the same time, processes should be to be in place to ensure that the goods are not lost or destroyed to ensure efficiency and good custody for the goods. By ensuring that these good functionality is set while maintaining a good price, customer satisfaction can be improved. And Administrators should periodically carry out trainings and assessment and tracking surveys on the service attitude of the couriers in order to ensure that the customer gets good service attitude and quality every time. Requirements in place for a unified dress code for couriers makes them look more professional to customers. Efforts should be made to meet the requirements raised by customers, to ensure that the process of customers



receiving service is a happy one. When the customer in the service process is in a happy mood, customer satisfaction would be improved. Hence, managers should primarily focus on the every detail of services process through staff training in order to give customers a positive impact. This will also make customers feel that the express delivery company has a sense of responsibility and the company can have a good evaluation, which can improve customer satisfaction.

Customer satisfaction managers should raise the threshold of the couriers, strengthen training the couriers to ensure delivery goods are not damaged or lost, so that customer is satisfied with delivery goods. Meanwhile, the mode of transport should be diversified, flexible and delivery goods should be timed to avoid traffic jams. Only through this way, customers will be satisfied with the service and brand loyalty can be enhanced.

If the express delivery company can improve service quality, enhance brand image. To give customers a good service quality and good brand image, it would be help the express delivery company to improve customer satisfaction. At the same time, improve customer satisfaction, will help the express delivery company enhance brand loyalty.

Limitations

1. In this study, as the data collection only focuses on Taobao merchants, this data survey cannot be fully represented to all customers of express delivery services. In addition, as Taobao merchants will pass down the courier costs to online shopping customers, their emphasis on price is not as strong as other ordinary customers.
2. In this study, the factors influencing customer satisfaction and brand loyalty also has their limitations. Service quality and brand image can cover some factors of company. There are also many theories of factors worth exploring.
3. For the questionnaire, the data were collected by questionnaire that translated English into Chinese language. So might not quite be the standard for Chinese people. Chinese Taobao merchants may have some questions that they did not understand, which may influence their answer to the questionnaire.

Recommendation for the future research

1. The respondents of this study only focus on Taobao merchants. Future researchers can expand the scope of respondents, to not only Taobao merchants, but also investigate other groups using express delivery service, such as the university students.



2. This study only explore two factors that can influence customer satisfaction and brand loyalty of private express delivery Service. Future researcher can explore the other factors that can influence customer satisfaction and brand loyalty of Top 5 express delivery service. such as the marketing mix.

3. This study only focus on Top 5 express delivery service company in China. Future researcher can study the international express delivery service, making data more effective and persuasive.

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Appendix

Questionnaire

Part 1: Personal information. Please checking only one answer for each question listed below. And check ☐ in the ☐.

1. Gender: ☐ Male ☐ Female
2. Age: ☐ ≤20 ☐ 21-30 ☐ 31-40
 ☐ 41-50 ☐ >50
3. Education level:
 ☐ Under high school ☐ High school ☐ Technical college
 ☐ Bachelor ☐ Master and higher
4. Income /per month:
 ☐ Under 2000 Yuan ☐ 2001~4000 Yuan ☐ 4001~6000 Yuan
 ☐ 6001~8000 Yuan ☐ 8001~10000 Yuan ☐ 10001 and Above
5. How long have you set up the shop in Taobao?
 ☐ Less than one year ☐ 1~2 years ☐ more than 2 years~3 years
 ☐ more than 3 years~4 years ☐ more than 4 years~5 years
 ☐ more than 5 years
6. How many pieces of parcel do you send and receive each month?
 ☐ <100 ☐ 100~300 ☐ >300
7. Which express delivery company are you using?
 ☐ EMS ☐ SF ☐ STO ☐ YTO ☐ ZTO ☐ others
8. What types of goods you are selling on taobao?
 ☐ costume ☐ food ☐ jewelry ☐ digital product
 ☐ cosmetic ☐ article for daily use ☐ household product
 ☐ entertainment product ☐ car ☐ others

Part 2: In the following questions, please check the corresponding scores according to the real experience after you using the express service. Please draw (√) according to your level of agreement in the corresponding box : 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree

Dimension	Measurement	1	2	3	4	5
Service quality	Outcome quality					
	1. Order delivery is Convenient.					
	2. This Express delivery company can arrive at the agreed place within the specified time to receive goods.					
	3. This Express delivery company courier service can be completed within the promised time limit.					
	4. This Express delivery company can guarantee of good Safety of goods.					
	5. Price of express delivery company is reasonable.					
Service quality	Process quality					
	6. Courier with a skilled professional knowledge, easy to communicate.					
	7. Courier attitude polite, enthusiasm to help you.					
	8. When you take or send Express, waiting time is short.					
	9. This express delivery company offer the service time able to meet your needs.					
Service quality	Remedy quality					
	10. When delivery items a problem arises, Express delivery company can make a reasonable explanation.					
	11. Your complaints can be solved quickly.					
	12. When the Express delivery company's own fault occurs, it can give you reasonable compensation.					
	13. The express delivery company service hotline is unimpeded.					

	14. When Service problems arise, you can easily find Express delivery company to solve.					
Brand image	Functional 15. The employee of this Express delivery brand is of high professional quality.					
	16. This Express delivery brand provided on-site service and it is very convenient.					
	17. Express delivery brand to provide delivery process timely tracking and tracing services.					
	18. This Express delivery brand goods served on are not lost, destroyed or exchange.					
	19. This Express delivery brand is high cost performance.					
	Emotional 20. This Express delivery brand good service attitude of staff.					
Brand image	21. This brand Express staff can patiently listen to my request or complain.					
	22. The staff dressing of this Express delivery brand uniform specification.					
	23. This brand Express staff to timely respond to the needs.					
	24. This Express delivery brand service committed to ensuring high.					
	Symbolic 25. The characteristics of this Express delivery brand close to my personality.					
Brand image	26. Use this Express delivery brand can help me a good impression to others.					
	27. Use this Express delivery brand can help me establish a positive and healthy personal image.					
	28. Use this Express delivery brand can let people think I'm very social responsibility.					
	29. Everyone thinks highly of this Express delivery brand.					
	Customer satisfaction					



	30. This Express delivery company goods of delivery make you satisfied.					
Customer satisfaction	31. Express delivery company courier time make you satisfied.					
	32. Overall you're satisfied with the Express delivery company.					
Brand loyalty	Behavioural loyalty 33. You will praise this Express delivery company to others.					
	34. You will recommend this Express company to others.					
	35. When need express delivery service, you will take this express company as the preferred.					
	Attitude loyalty 36. I find this express delivery company better than other company.					
	37. This express delivery company is repeatedly of better quality than other express delivery company.					
	38. Although there are other express delivery company alternatives, I still prefer to this express delivery company.					

Competitiveness in global wind energy: A comparison study between Southeast Asia and India

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Abstract

The purpose of this paper is to analyze the competitiveness factors that are currently supporting the wind energy industry on a global scale, with a special focused on the trends to grow in Southeast Asia and compare its development with the Indian panorama. This qualitative research looks to explore the areas to increase the capacity or reinforce the participation of firms in the industry as manufactures, service providers or investors for wind energy projects in the region and in a global scale. For achieving this, interviews with stakeholders in the field were conducted under the concept of Porter's diamond model for competitive advantage, that includes, market factors, industrial factors, social factors and political factors plus the environmental factor.

Findings showed a relationship between modernity concept and wind energy, large corporations and countries are adopting energy mix systems to cover their energy needs, this is bringing one or two turbines at least for companies that want to create a positive environmental impact in the community, but also create a technological advance image for their stakeholders. The environmental factor is specially playing an important role in places like China and India where the wind turbine is seen as a related solution to air pollution.

Keywords: Competitiveness, Wind energy, Developing countries

Introduction

While in advance economies like the United States governments are taking serious steps to mitigate the effects of climate change, for example including not just schools but also farmers and traditional industries to turn to better practices (Monroe, Plate, Adams, & Wojcik, 2015). Adaptation is essential for people to create new ways to perceive and change attitudes for global warming concern, and when the greatest level of concern is met, the wiliness to participate is shown by the group that was exposed to this information and accepts, subsequently the training and modification process. Institutional support is still needed worldwide to create this first step for democracy and participation in the developing countries.

In the Southeast Asian region of the planet, in countries with coastal lines and island territories, studies are being conducted for the population to learn how to react or mitigate the effects of water due to sea rising levels or monsoon. But it is specially people that live in urban areas in these countries those who suffer more constantly of inundation and risk for the contact with polluted flood water, as it happens in Bangkok, Thailand and Ho Chi Min City in Vietnam (Tran Than Tu, 2011).

Governmental control and marketization are then opposite forces when the goal is to achieve national priorities, but the corporations are looking specifically for profits without a social or conservationist concern, then the effectiveness of the state is not proved, as it has happened in East Asia, either the development is moving where the market wants, or

where the policies are heading (Preston, 2000).

Globalization impacts have not been uniform and they have widened disparities on social perspectives (United Nations, 2002). The mutual dependency from one country to another is making some states to adopt more severe rules to fight climate change; European countries lead the way in natural preservation and regulatory frames for sustainable development, after more than 50 years proving that economic development alone does not guarantee wellbeing, what includes money but also the possibility of living a good life (Goulet, 2002). These measures are not just strategically crafted for the good of the citizens, but are also presenting business opportunities that are affecting less the global resources in their countries, and at the same time showing better paths to economic performance that are slowly adopted by the developing countries, what Goulet (2002) calls a 'just economy in a globalized world', especially China and India, the new powers in the international trade that are starting to create a political balance along with Russia to contrast the western power nations.

Energy is the tipping point in the consumption side today, but also on the production side of the global market, as electronic transactions are growing in importance and market coverage against traditional trading methods. We have at least three dimensions for the analysis of the role of energy in the present: the macro-economic influence, geo-political implications, and the environmental concerns (Bhattacharyya, 2007).

With development, the increase of the middle class in developing countries, including India and the countries in



Southeast Asia is bringing a more accelerate consumption for more products, but when this is not accompanied by high education and environmental concern, individual level mitigation measures are not taken (Semenza, et al., 2008).

Commercial integration processes are taking energy as a priority area, ASEAN is currently building different pipeline regional projects and grid extension following interconnectivity areas, mainly going from Thailand to Malaysia, and further with Indonesia. But these are still programs on a government side, very far from the scenario that the European Union is facing today, following the European Commission, their market is changing a lot due to the renewables share in energy increasing rates, expected to increase from 25% today to 50% in 2030 (European Commission, 2014), they might still need to regulate access to traditional fuel energies in order to fulfill their consumption needs.

India is living the transition from traditionally rural sources of power, to electricity for cities, three quarters of the projected increase will be driven by residential areas in 2040, on a different perspective industrial energy consumption is expected to increase in 50% to that year. Despite the efforts to establish more than 50% of the energy supply by renewable energies in 25 years, the rest is expected to be covered by coal-fired plants, what will account to the major growth of this source of energy in the world. Some 340 GW are expected to be installed by Solar and Wind in India in that period of time (International Energy Agency, 2015).

Energy security is also worrying nations that are the global manufactures of the

global industries, like China, this country will face many challenges in their supplying sector in the upcoming 20 or 30 years and probably will extend to the long term, due to present characteristics oil prices are low, but as soon as the global energy sector will not be able to account into the demand side, oil prices can be increased on the final stage of the production curve in the future, in this stage, even China's main source coal and its availability can be put in risk for their domestic market (Liu & Jiang, 2009).

The research academic and managerial contributions

This study tries to answer whether it makes an economic sense to engage in wind energy activities, mostly for wind turbine, along the sustainable value chain, on a global perspective. Comparing the wind energy technology, on its modern conception, better known as wind turbine, with other products or industries, for example car manufacturing, or aviation; it is transiting the early period in many countries, the establishment of the sector in others, and the repair or replace time (Xie & Simon, 2006) is starting now for old facilities in Europe and United States, so understanding the demand needs for energy in the future on a macroeconomic sense is vital to participate as suppliers in the energy market to generate profitability for local economies and multinational corporations.

The contribution of this study is isolating wind energy from other renewables, and create a framework of study specialized on it, in which intrinsic characteristic can be discovered making changes in the dynamics for this industry. This study creates a non-technical approach to



analyze a commonly engineering related subject, into a marketing perspective.

Implication of the study for stakeholders

The countries from Southeast Asia in this study will be considered, under the parameters exposed, as competitive in wind energy, or non-competitive in wind energy, in the international market, once the methodology for data analysis has been done.

This research project brings a new element to the traditional Porter Diamond for National Competitive Advantage, considering environmental concern as a factor to help in the transition to renewable energies in all parts of the sustainable value chain, in this particular case wind energy.

The result of this research will provide an updated analysis and conclusions about the position to compete for the Southeast Asian region and for selected countries in a global perspective, when it is compared with India. The results will indicate in which aspects of the competitiveness Porter's model more efforts should be done to increase participation in the industry to compete in the global sustainable value chain, and in which the region or the selected countries show advantages to promote the industry growth.

Traditional manufactures of plastic and similar materials could start manufacturing wind turbine parts to export, service providers could find opportunities due to remote or in-site services for the industry, and private financial institutions, or investors could find a way to diversify their operations, value for money scheme for increasing

sustainability in energy projects (Atmo & Duffield, 2014), and use this growing industry to benefit Southeast Asia on a regional or national scope.

Review of the literature

For the related literature revision, journal articles were retrieved from online research journals databases like Emerald and ERIC, articles in google scholar were used to explore open academic sources, official websites were consulted, like The World Bank for statistics, and semiofficial sources like The World Economic Forum and International Energy Agency for specialized articles and scenario analysis. Finally, specialized web sites about business, marketing, technology and engineering provided specific information about technical references and examples of current corporations involved in the industry.

The literature related was first analyzed under a competition scope, moving to the industry itself, and the propositions and trends about it, to explain the need to analyze the need for this industry to gain more dynamism in developing countries to be more integrated and competitive globally, and to understand what are the economic factors stopping its advance.

In his approach to explain the relationship between the origin of wealth and the function of the state, Adam Smith (1776) disregards the main concepts concerning to gold and silver held by the states. By linking the way, the real wealth comes from the activities that citizens develop, and how they impact the national economy, and when these activities are more than enough to satisfy

the local markets, these goods start an expansive distribution that brings economic benefits to the production center (Smith, 1776).

Smith (1776) then assume that each country is more competitive to produce one good, then it is better for that country to focus to produce what they can produce cheaper and trade it for what a second country can produce at a lower cost, bringing benefits for them while the transaction is completely and on a regular complementary base.

A complimentary theory comes from David Ricardo, in his manifest about the comparative advantage of countries, where he promotes the specialization of nations in producing certain goods, for what they have a natural advantage when compare to the trading partners; by doing this the world output for one product could raise bringing benefits, but the real value of his contribution is related to the opportunity costs that are associated to carry the production of one good while giving up on producing others (Ricardo, 1819). Trade based on comparative advantage arises from differences between both countries and in which prices are equalized to be considered as international measure (Brakman & Heijdra, 2003) of choice for the demand's side of the operation.

While the international theories suggest that the competitive advantages of a country to compete in the international market are inherited, factors related with land, natural resources, population size, labor specialization, Michael Porter (1985) introduced different concepts that can be achieved through a national initiative, led by the government, or the powerful and leading force to create the basis of economic development of a

sector, what today is considered a cluster, and enhance productivity. These conditions to be set are: factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry (Porter, 1985).

The importance of regions as a factor of national strategy, including international connections, supported on national policies to improve productivity and increase attractiveness, brings the cluster-based economies for the export industries, following master economic plans that became popular and are still being the starting point for many countries today (Ketels & Memedovic, 2008).

International marketing plays today an important role while discussing how to attract investments, place orders to export or provide services in the international arena, the national identity, as the time and references started to relate certain products to the image of a country it has create a country-brand that is today a parameter to bring consistency to the national competitive advantage firstly suggested by the Porter's model for the international competition in today's world, what is known as the country-of-origin effect (Jaffe & Nebenzahl, 2001).

When it comes to developing countries, attitude plays an important role, and it is contagious due to phenomena like relativism and imitation, but it is always bypass with the price effect (Arli, Tjiptono, & Porto, 2015), when it comes to choosing between morals and consumption, price might lead consumers to find alternatives to acquire high technology in a way that can maximize their resources.



The factors taken in the account for the national competitive advantage of nations by Porter (1990) are divided into two groups, the foundation of prosperity in the microenvironment represented by the basic factor conditions: Natural resources, physical resources, unskilled labor and capital resources. Secondly the advanced factors taken into account are: Modern data communication infrastructure and highly educated human resources, the efforts that a nation is taking to improve innovation.

The demand conditions are the forces surrounding the consumption levels for products or services in any sector or industry, represented by the composition and sophistication by local consumers, innovative needs to be served, and specialized segments to be served domestically and internationally. The movements in both dimension for the market are also relevant for these measures, the dimension of the market growth and the way the market is growing.

For the related and supporting industries Porter's ideas for measuring competitiveness are located in the locally

based suppliers and firms engaged in related activities or fields; and the presence of clusters instead of isolated companies.

In terms of the firm strategy, structure and rivalry the managerial style to run companies in the country and the organization of firms determines competitiveness. The goals the organization pursue; the way new business enter in the market and the domestic rivalry increase the level and aggressiveness of competitors leading to refined markets and innovation.

Porter includes two exogenous factors to the diamond, chance and government. Chance is described as the factors out of control for the firm, or groups of firms, bringing discontinuity to the competitive position that the country is holding.

Government is important in this model as the policies apply by certain country help to increase or decrease competition, taxation and cluster formation facilities are examples of these initiatives to boost production, and further consumption and specialization.

Conceptual Framework

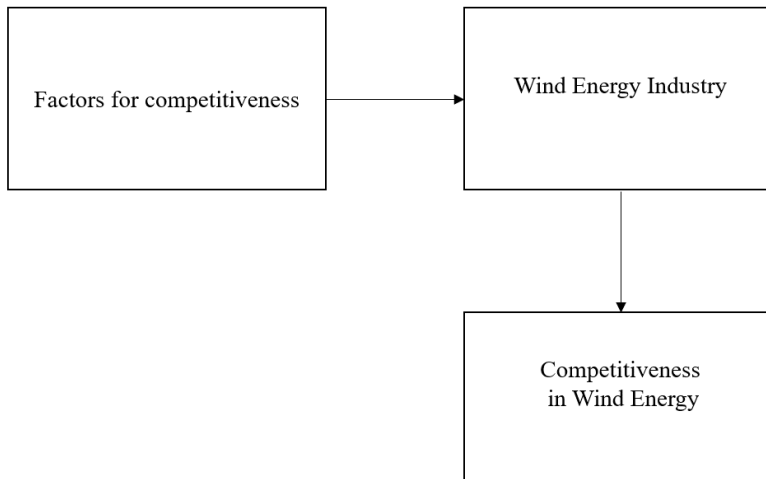


Figure 1 Conceptual framework for the research.

To apply a qualitative model research, and integrate statistical information to use the resulted factors, the factor chance has been replaced by environmental concern after conducting the interviews,

a relationship with culture, that has impacts on innovation, as Hofstede (2001) claims when he refers to the diffusion of the new technologies.

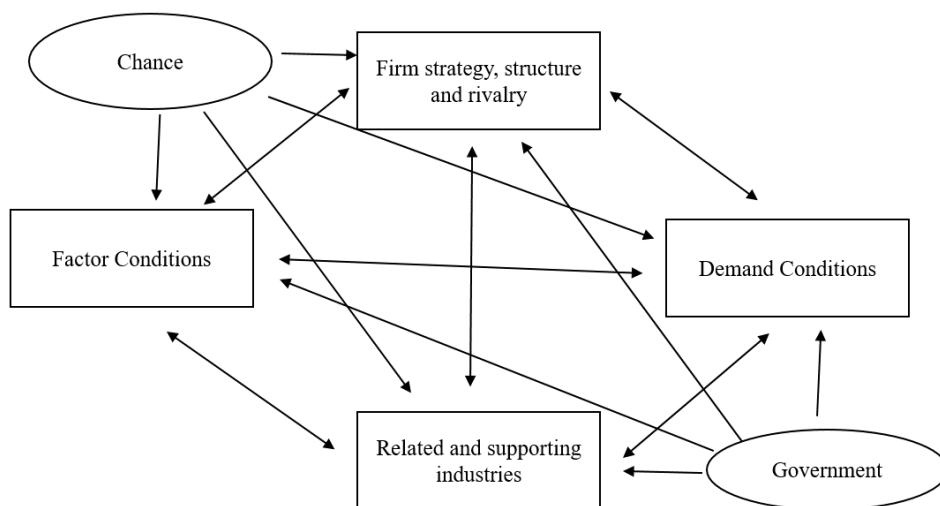


Figure 2 Graphic representation of Porter's Diamond for competitive advantage of nations. Porter's Diamond for competitive advantage of nations. Porter, M. (1990)

The following propositions were considered after analyzing the model to calculate the National Competitive Advantage in a given industry or market.

1. Porter's Diamond Factor Conditions of a country affect competitiveness in wind energy sector.
2. Porter's Diamond Demand Conditions of a country affect competitiveness in wind energy sector.
3. Porter's Diamond Related and Supporting Industries concept affect competitiveness in wind energy sector.
4. Porter's Diamond Firm Strategy, Structure and Rivalry concept affect competitiveness in wind energy sector.

5. Porter's Diamond Government concept affect competitiveness in wind energy sector.

6. Society's Environmental Concern affects competitiveness in Wind Energy Sector.

7. Southeast Asian countries are suitable to compete as suppliers of the global wind energy sustainable value chain.

Methodology

This is a qualitative research, that used the inductive method taking the theoretical assumption that the Porter's Diamond is a framework to group the data and look for relationships. The criteria for selecting this model was

based on the possibility to group the results of the interviews to analyzed the industry in a holistic way, bringing all the characteristics surrounding the industry a similar degree of importance during the analysis. In this way, the researcher can extrapolate to the region of the study, to other similar studies, focusing in certain type of factors when the propositions change to study this industry. See Figure 2.

The information was obtained based on semi-structured interviews to validate the categories (Paler-Calmorin & Calmorin, 2007), that are the Porter's Diamonds axis, except the factor 'chance', that is substituted by the category proposed for this study, 'environmental concern'. As an add-on to apply the study results secondary data is used to analyze the six propositions that have impact in the unit of study, wind energy industry, in terms of competitiveness based on the qualitative information obtained through the stakeholders in the industry in the interviews, and subsequently using discriminant analysis, separate the counties use for the application example, six countries in Southeast Asia and India as point of comparison, in two groups, competitive and not-competitive.

The stakeholders in the industry were selected based on a sustainable perspective for the value chain, with special focus on the technical side, but balanced by public policies and environmental services providers and experts, with a global vision, and experience and vast knowledge in the industry regarding their connection with it. To find the experts a mix of internet based search was used, LinkedIn and Facebook, and personal contacts provided information through the

snowball approach to reach interviewees. The criteria for the technical and marketing experts followed the moment and geographical approach meaning current work in the industry, and the work zone to be Southeast Asia. For the policy makers and sustainability experts the criteria followed international knowledge and/or projects in the field, like the European Commission on Energy Policies and Environmental Assessment for Infrastructure projects. The number of interviewees was reduced to six because of reachability and not repetition of the profiles, as this is a qualitative- interview-based research.

The researcher used interviews starting with the general question about the factors in the opinion of the interviewee to assess competitiveness in wind energy in the conditions that global scale demands today. With this the researcher explores the stakeholders view and creates an optimized way to continue relating the opinions into categories for further analysis.

Under an adapted framework of Porter's diamond model for competitive advantage of nations, changing the exogenous factor chance for environmental concern as suggested by Polonsky & Mintu-Wimsatt (1995), and consequently by Bang, Ellinger, Hadjimarcou and Traichal (2000), with a similar approach to the way 'culture' is used by Van Den Bosch and Van Prooijen (1992) to be more appropriate for the wind energy industry and the innovation it represents. Interviews are used on this part of the research to collect data to confirm the model or gather information that could be integrated to the model; and finally, test the accuracy of the independent variable



environmental concern to the proposed model and how to weight it in relation to the other independent variables or factors affecting competitiveness in an industry.

The step of applying the information obtained brings an example to the model that is the result of the qualitative research, and creates the base for using the model to compare other countries for this specific industry.

Following a previous research made by Dogl, Holtbrugge and Schuster (2012), where Porter's diamond is used for the general renewable energies industry, the

researcher scopes down to focus only on wind energy following the data sources previously used to make qualitative parameters to measure traditional factors explained by Porter (1990). In this way interval scales are applied to match with Porter's intentions to develop an analysis for competitiveness in a simplified quantitative model (Cartwright, 1993). Proxy variables are assigned to measure each factor based on official and semiofficial sources like the World Bank, and the World Economic Forum.

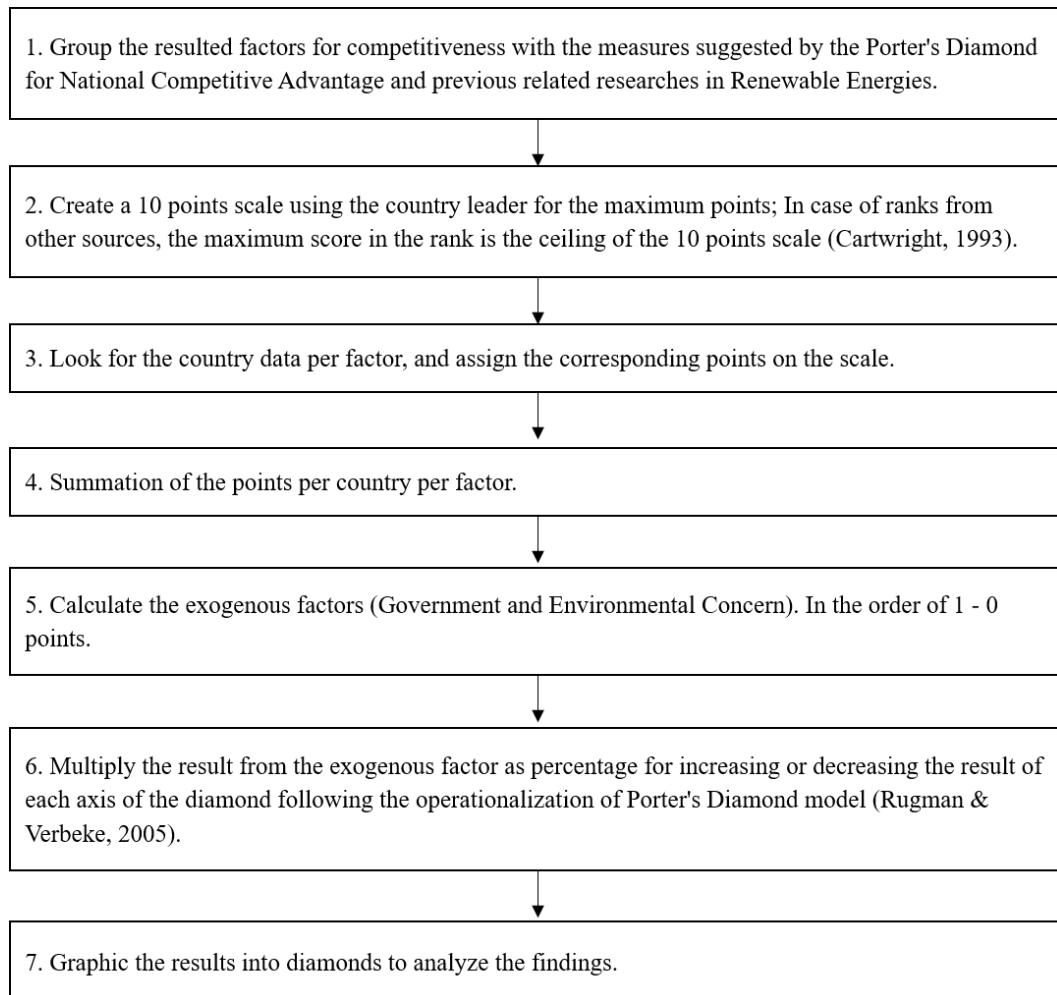


Figure 3 Steps to apply the result model.

After the data for each factor is collected, the information is converted into a minimum of zero and maximum of ten, and for those factors having more than one proxy variable the arithmetical average will be calculated to bring a final number in the determined scale. For the exogenous factors, Government, and Environmental Concern to be considered in this research, a three-point scale is considered, a change from the previous model used by Dögl, Holtbrügge, &

Schuster, in the previous study when they also considered biomass and solar (2012) and after the answers obtained on the interviews, to weight the exogenous factor Government heavier than the cultural factor; in the order of minus three (-3), for only one of three indicators to favor wind energy governmental support, zero (0) for two of three indicators to favor wind energy governmental support, and three (+3) for a full coverage of the three elements for a government that

facilitates the diamond development for competitiveness (Cartwright, 1993). For the Environmental concern, a three-point scale is also used, accounting for minus one (-1) for countries that showed a not concerned opinion, zero (0) for neutral concern, and one (+1) for countries who showed concerned opinion in the used measurement instruments. These values are calculated to increase or decrease in the order of ten percent for the axis in the diamond by each point to be represented graphically, a variant from the SWOT Analysis calculation proposed by Michael Porter, and for further conclusion about the possible upcoming scenario for wind energy in each market in terms of competitiveness (Rugman & Verbeke, 1993).

Klecka (1980) suggest the discriminant analysis as a profitable technique to be

applied to studies trying to find economic differences between geographic regions, as far as there are two or more groups and we presume have differences in several variables, and those variables can be measured at an interval or ratio level, helping us to classify these cases into groups where they most closely resemble. According to Srivastava and Rego (2011) a discriminant analysis works by creating a new variable called the discriminant function score, which is used to predict to which group a case belongs. In this study we use India as the discriminant function score, as this country is facing a positive energetic transition to renewable energies among the developing countries (World Economic Forum, 2014).

Table 1 Selected countries to apply the result model.

Country	IMF Classification 2015
Singapore	Advanced Economy
India	Developing Economy
Indonesia	Developing Economy
Malaysia	Developing Economy
Philippines	Developing Economy
Thailand	Developing Economy
Vietnam	Developing Economy

Non-probability sampling is used in the application of the model, based on the purposive sampling, for this type of sampling the quality of data gathered

brings reliability and competence to the study (Tongco, 2007). Following Porter (1990) sample to analyze the diamond model for the competitive advantage of

nations, this paper considers developed countries and newly industrialized countries (Bozyk, 2006), including Vietnam for its potential in the industry (Prajogo, Laosirihongthong, Sohal, & Boon-itt, 2007) in Southeast Asia region, and India for research design purpose to apply this framework. Due to lack of sufficient data and representation through the sample Brunei Darussalam, Cambodia, Lao P. D. R., Myanmar and Timor-Leste are not included.

To measure the Porter's Diamonds different axis, we related secondary data according to previous schemes used under this methodology (Dögl et al, 2012) based on operationalization model (Rugman & Verbeke, 1993) and as the result of the information collected with the experts' opinion for the interviews to test the model.

The qualitative data obtained from the interviews is coded by grouping the answers relating them in similarities or contrast with other interviewees responses, then analyzed them in context of the framework used to categorize the factors for competitiveness, following the research propositions.

For the applied complimentary exercise with the result model with the selected countries, the data was analyzed first with descriptive statistics mean, media, mode and standard deviation for each factor in Porters Diamond for Competitive Advantage of Nations considering all the units of analysis or countries in the sample (Beri, 2010) except for India, as it is the discriminant function score. The four dimensions of the diamond were calculated with a simplified quantitative model based on

interval scales (Cartwright, 1993), from zero (0) to ten (10) to assign points for each compared with the leader in the sector, China (World Wind Energy Association, 2015) or taking the maximum parameter in the index and then were compared with the results for India country by country, and finally in a regional diamond introduced by comparing more than two countries as it is introduced by Dunning (1993) and refocused by Rugman and D'Cruz (1993) by recognizing international and global competitiveness.

In order to rank countries depending on their governmental support, the statistical information used is related with the policies and targets creation, and policies enacted, countries were graded depending on their status and time that the policies have been carried out, one point for each positive indicator; this measure is completed with type of incentives per country (International Energy Agency, 2016), better scores went to countries with specific policies for wind energy development, based on a catalogue of different type of incentives and tax reduction (KPMG, 2011). No policies for renewable energies minus one (-1), general policies for renewable energies zero (0) and for specific policies for wind energy one (+1). The result was a conversion to the three points scale previously explained in the methodology.

For the factor tested and validated for this research, environmental concern as an external factor for competitiveness, environmental concern, the concepts related to this measure are consumer concern, knowledge, beliefs, and

attitudes toward renewable energies. The measures were taken from climate change awareness, climate change cause, climate change perceived as a threat (The Gallup Group , 2009); and level of concern that global warming can harm me personally (Pew Research Center, 2015). Positive attitude toward environmental concern was accounted when more than 50% of the respondents of polls showed it. As a result, the three points scale calculated assigned for four to three negative concern attitudes, minus one (-1), for three positive concern attitudes, zero (0) and one (+1) for four positive concern attitudes.

Scores for Southeast Asian countries are averaged to compared them as a group and individually against India's score for each factor, and multiplied for .5 per axis of the diamond model to be able to bring graphic conclusions, and amplifying the diamond using the result for government and environmental concern.

Finally, the statistical measures of mean, media, mode and standard deviation were calculated to show more information about the data in terms of similarities between countries and dispersion.

Analysis

The results of the interviews suggested that Porter's diamond for competitive advantage of nations is still accurate to measure the level of competitiveness of wind energy in a global scale, and specifically with an industry in nascent stage in Southeast Asia. These factors also imply conditions for new entrants for wind energy on a global scale, as the market moves taking care of the presence of these factors independently of their presence level, the industry is adaptable in this case to natural conditions due to technology.

Table 2 Summary of interviewee's profile.

Interviewee	Profile
MB	Sales Manager for Southeast Asia for one of the world leading Wind Energy Turbines manufacturer.
RT	Sales Manager for Southeast Asia for a global off-grid turbine manufacturer.
DP	Renewable energies consultant for Southeast Asia for one of the world leading consultancy firms.
PC	Manager of an Environmental Impact Assessments bureau working with wind energy projects.
CL	International development consultant for a global NGO.
PG	Renewable energies policies in an international governmental office.

In the interviewees' point of view for this research answers related with the four main factors were found: factor conditions, such as the environmental conditions, by taking care of the energy sources we have today and we need for the future (PC, personal communication, February 13, 2016) we ensure more competitiveness for wind energy; and technology innovation, that is helping to create products for fewer wind conditions, (MB, personal communication, February 19, 2016); demand conditions in terms of market volume with the energy needs and the sophistication with investment interest, countries are looking to move in a direction that allow them to maintain their development, and wind energy needs skilled labor (MB, personal communication, February 19, 2016), this skilled labor is increasing with engineers in different parts of the world, including Southeast Asia (RT, personal communication, March 11, 2016), at the same time this is making the industry attractive for investors with a sustainable vision, like ethical banks (CL, personal communication, January 20, 2016); environmental concern as a personal attitude is transcending to business decisions from stakeholders, that despite focusing on profits, find in wind turbines a way to show their companies as sustainable oriented (RT, personal communication, March 11, 2016), related and supporting industries need to exist for wind energy as it is a complement to cope with the energy needs, there is a huge corporate support for clean energy these days (DP, personal communication, February 9, 2016). The future to compete is related with what is around the turbine, as the turbines have reached a point of efficiency that is

difficult to continue improving without increasing the manufacturing or operation cost, but good results are coming from weather forecasting software accuracy and reinforced of the transmission grid (RT, personal communication, March 11, 2016).

For the firm strategy, structure and rivalry, the need to compete despite the intensity with own capability, and the access that innovation brings along with the openness of the market to compete, are vital in wind energy and the whole energy industry today (DP, personal communication, February 9, 2016; MB, personal communication, February 19, 2016; PC, personal communication, February 13, 2016).

For the exogenous factors government is still fundamental with policies (CL, personal communication, January 20, 2016; MB, personal communication, February 19, 2016) and the desire of not lagging behind compared to other countries to attract investments and for good image (DP, personal communication, February 9, 2016).

For the factor proposed as a measure to increase competitiveness, environmental concern, is fundamental these days for an academically advanced society (PC, personal communication, February 13, 2016) while in developed markets it has been considered an important factor that has supported the changed, in countries where the democracy is not the system, like China, it has not really been of an impact to increase their competitiveness (CL, personal communication, January 20, 2016). Environmental awareness extents more to consumer products (DP, personal communication, February 9, 2016) people agree about the change to

renewable energies, but when it comes to actually doing it, it faces some challenges (MB, personal communication, February 19, 2016). The way companies can engage more consumers will have a bigger impact (CL, personal communication, January 20, 2016), that is why companies in wind energy don't want to base their business on this purely (MB, personal communication, February 19, 2016). For the whole interview results see appendices 1.

In contrast, new business opportunities are coming as the wind turbine is seen as a modern and sustainable symbol, that is making companies invest in one or two turbines to deliver an image of environmentalist that is more and more important for the final consumer. In the near future consumers, will demand companies for transparency in their production systems input to manufacture products, and they are expecting percentages in renewable energies for any industries that are energy intensive, including the general industry, like food processing and appliances for personal consume (RT, personal communication, March 11, 2016).

While examining the interviews closely we found that there are different relevant aspects concerning to the general aspects, that is why the Porter's Diamond model serves in an accurate way to make groups of the answers obtained.

For the general question about the factors affecting competition in wind energy the stakeholders are more and more interested in shifting their energy resources to greener options, not only governments but also shareholders looking for investment options, and development organizations, meanwhile

the consumers are still far from getting more awareness of the sources of their domestic power. Countries want to participate in a more modern market, and wind energy has a lot to offer for this transition, participating in the economy and job creation coming from relatively new industries. The fact that the equipment is mainly from US and Europe brings a sophistication idea about the related operations. Other important factor to move to renewables is the oil prices fluctuation (DP, personal communication, February 9, 2016).

The dynamics we have today as societies and communities are only possible to maintain with new energy sources to complement the traditional ones and also to cope with the increasing trends for consumption. Population keeps increasing and the energy resources need to align with these needs, that is why more natural resources are used, but the impact should not mean an environmental contradiction to the live conditions of life (CL, personal communication, January 20, 2016).

At the same time wind energy turbines are more competitive using the technology adaptation to adapt with the wind conditions available no matter the location in the world. The industry does not depend anymore on government incentives, competing with other traditional sources creates a more adaptable industry that is not just reacting to the market, but building its own markets using the research of the wind operational conditions, bringing even better costs. The goals are perceived on a customer percentage from the industry, a 3% of their consumption, therefore the industrial market and consumer market



awareness of the source will be more relevant in the upcoming years. The experts see a change in the consumption, first in developed countries where the percentage of renewables used for the production will be part of the product information, something similar is already happening in transportation comparisons between a train ride and car use in the European Union. Other forces in the political arena are concentrating the power in the oil industry, like Russia, so independency of traditional resources is also a force that is moving western powers to develop new ways to keep development levels at the same or even a better pace (RT, personal communication, March 11, 2016).

The importance of the environmental message that has accompanied the wind energy is still present and it is a necessity for people, in countries like China, where the air in the atmosphere represents a risk for the public health. (RT, personal communication, March 11, 2016). So the two conditions are now a need that is making the governments to really change their view about wind energy, as the cost is not anymore an excuse to continue using traditional combustibles like coal or oil to generate power (MB, personal communication, February 3, 2016).

The narrative and discourse of climate change is still favorable to create political changes favoring the wind energy industry and other renewables, the Paris Agreement on Climate Change is the reflection of the relevance of the topic, and certain factor like poverty are bringing these not centralized power technologies the opportunity to integrate lower income communities into the

markets (CL, personal communication, January 20, 2016).

The society is still unable to choose in the market about their preferred power source, despite it is getting more and more popular, most of renewable energies, including wind energy are not really known as realistic alternatives in the developing countries. In the developing world government incentives are still part of the schemes to include renewables, this has brought variability on demand and competition, what is driving the industry to become self-sufficient despite financial aid from the government. (MB, personal communication, February 3, 2016; PG, personal communication, April 29, 2016).

The social response is favorable always for the positive relations that communities and the general public have about the renewable energies, they want turbines, and this social force has been pushing not only governments for a broader adoption, but also corporations that continue diversifying their energy sources with the objective of create a greener image, but the cost being more competitive it is also a benefit in terms of fixed costs for them (MB, personal communication, February 3, 2016).

Investors are looking for long term benefits and certainty for their shares, industries like oil and other that rely on international prices, are opening doors to non-marketable fuels, like wind, bringing investment profitable results, sustainability practices are bringing benefits in the long term for organizations (CL, personal communication, January 20, 2016).

The technological development in the global market are bringing benefits to this and other industries, in the case of wind energy these technological changes in the turbines, are making the technology more accessible to areas previously considered not relevant for wind energy. (MB, personal communication, February 3, 2016). The market is still sustained on a non-strong enough base as the grids are still fragile, and this creates space for alternatives to prevent shortages that causes an unstable economy, so renewable energies are filling these gaps that traditional power plants have never filled (RT, personal communication, March 11, 2016).

The industry is getting into a higher level of specialization, that is requiring professionals in a global scale, today these engineers are available in different areas of the world and this has reduced significantly the costs for planning, installation, operation and replacement stages (RT, personal communication, March 11, 2016). Once the organizations, like central governments, urban planners and private corporations, understand the expanded system that wind energy uses to be implemented they understand that the industry brings benefits on a dispersed way providing employment and power supply stability extending the power grid and the coverage, hence the market grows along the electric system, in a stakeholder inclusive way, contrary to traditional fuel generation (MB, personal communication, February 3, 2016).

Awareness brings more social participation and saying in the government policies and decisions to open spaces for renewable energies, in countries like Denmark and the Netherlands, this has been a force that used the tradition of farmers to be able to generate their own energy systems, so the transition phase was smoother than in any other regions (CL, personal communication, January 20, 2016; MB, personal communication, February 3, 2016).

The territories are experimenting an adaptation process that is the result of the natural resources scarcity, that it is making necessary an even larger use of them, such as the power use for weather mitigation for mankind, either for high or low temperatures. We see examples like Germany and France where the countries started welcoming the wind energy due to people's desire of modern and greener technologies that other neighboring countries were already implementing (DP, personal communication, February 9, 2016).

The results of the calculations are shown in Table 3, with all the internal and exogenous factors. To measure the national competitive advantages of the countries in the study, and find how suitable they are to compete in the global wind energy value chain, the results were compared with India and it is also possible to notice their similarities and areas of differences. See table 4.

Table 3 Results after the secondary data calculation per country per factor of Porter's diamond for national competitive advantage in wind energy.

Factors	IN	ID	MY	PH	SG	TH	VN
1. Factor conditions	13.5	8.0	7.3	8.0	1.8	5.7	7.0
1.1 Basic	7.5	5.0	5.0	3.0	0	4.0	5.0
1.2 Advanced	6.0	3.0	2.3	5.0	3.3	1.7	2.0
2. Demand conditions	5.5	4.0	8.0	8.5	8.5	11.5	4.0
2.1 Market volume	3	1	5	5.5	5	8.5	1.5
2.2 Sophistication	2.5	3	3	3	3.5	3	2.5
3. Related and supporting industries	7.0	3.0	9.0	4.0	18.0	5.0	2.0
3.1 Related companies	3	3	4	4	8	4	2
3.2 Support	4	0	5	0	10	1	0
4. Firm strategy, structure and rivalry	11.5	11.0	16.0	13.0	18.5	15.5	15.0
4.1 Strategy, structure	7	7	9	8	10	9	9
4.2 Rivalry	4.5	4	7	5	8.5	6.5	6
5. Government	3.0	0.0	-3.0	3.0	-3.0	3.0	-3.0
6. Environmental culture	0.0	-1.0	0.0	0.0	0.0	1.0	0.0

To calculate the diamond model, it is necessary to combine the axis, to numerically and graphically find the intersection of the different forces in the market, as it is shown in Table 4.

After applying the exogenous factor, amplifying or decreasing score for

Government and Environmental Culture, to multiply the results in Table 3 for the percentage given by 10 percent for each point we have the following results in Table 4, this is the information used for descriptive statistics, using exclusively the Southeast Asian countries.

Table 4 Countries comparison to make the equation to combine the axis of the diamond.

Areas of the diamond	IN	ID	MY	PH	SG	TH	VN
ASD = firm strategy, structure and rivalry * 1/2 demand conditions	31.6	22.0	64.0	55.3	78.6	89.1	30.0
ARD= related and supporting industries * 1/2 demand conditions	19.3	6.0	36.0	17.0	76.5	28.8	4.0
ARF= related and supporting industries * 1/2 factor conditions	47.2	12.0	33.0	16.0	30.0	14.2	7.0
ASF= firm strategy, structure and rivalry * 1/2 factor conditions	77.6	44.0	58.7	52.0	30.8	43.9	52.5
Area sum	175.7	84.0	191.7	140.2	216.0	176.0	93.5
Difference with India	0.0	-91.7	15.9	-35.5	40.2	0.2	-82.2

On table 5 the exogenous factors government and environmental culture are summed up and then adjusted to compare with India, the difference in the

table shows negatively or positively depending on the case for the Wind Energy industry.

Table 5 Applying the exogenous factors government support and environmental culture to adequate the final result, and difference between countries and India.

Factors	IN	ID	MY	PH	SG	TH	VN
Government support	3.0	0.0	-3.0	3.0	-3.0	3.0	-3.0
Environmental culture	0.0	-1.0	0.0	0.0	0.0	1.0	0.0
Total adjustment	228.5	75.6	134.2	182.3	151.2	246.3	65.4
Difference with India	0.0	-152.9	-94.3	-46.1	-77.3	17.9	-163.0

Finally, the result for each of the axis and intersections of the diamond were adjusted by the exogenous parameters to create the graphic results for the research. In this table, we can see where

the potential is found compared to India for the Southeast Asian countries and increase their possibilities to compete in the wind energy sector on a global scale. See Table 6.

Table 6 Adjusted results for each factor applying the exogenous parameters Government and Environmental Culture.

Factors	IN	ID	MY	PH	SG	TH	VN
Firm strategy, structure & rivalry	41.1	19.8	44.8	71.8	102.2	115.9	39.0
Demand conditions	25.0	5.4	25.2	22.1	99.5	37.4	5.2
Related & supporting industries	61.4	10.8	23.1	20.8	39.0	18.4	9.1
Factor conditions	100.9	39.6	41.1	67.6	40.1	57.1	68.2

Conclusion

The results of the interviews showed that competitiveness characteristics are all in the radar of Porter's diamond model for competitive advantage, as they can be grouped in market, social, political and industrial characteristics, innovation and technology, resulted particularly relevant in the analysis of wind energy, as well as availability of skilled labor force. See figure 6.

The proposition of the category environmental concern under an approach of culture, was concluded as important for all of the interviewees, but the conclusion is that it brings an unbalanced measure for competitiveness as it is only the basic principle for the industry introduction, and it is really important for countries that are feeling the impacts of climate change, but for others is not anymore a factor that brings reliability in the industry, but creates uncertainty in markets where the governmental decision factor is still very high (MB, personal communication, February 3, 2016). Nevertheless, this proposition is adequate at this moment when countries will start to put pressure and monitor the use of funds to shift to

environmentally friendly practices like wind energy for the signing countries for the Paris Agreement in December 2015 (RT, personal communication, March 11, 2016).

The information collected in the interviews shows a new dynamic between the relationship of the wind energy related with traditional fuels, where the climate impact of continuing using these sources is met with a more competitive price that is leaving the tendency of being complimentary technologies, and becoming first options in many countries for development projects no matter the dimension, as the technological conditions are even coping with the traditional variability concern factor for investment.

Related with the market, energy security and data sharing through social media and internet applications are raising the need for more renewable energy input in the grid, the wind turbine is a symbol of sustainability and health in countries like China as breathing is related with air and there is a relationship with breathing and the wind (RT, personal communication, March 11, 2016).

In relation with the industry, technology surrounding the turbine is getting improved in order to minimize costs even more and contrast the effect of variability that comes with the operation of wind farms or installations powered by wind. Cost efficiency is creating new dynamics to minimize government subsidies dependency, or the environmental relationship to access the fossil fuel traditional markets in the developing world (DP, personal communication, February 9, 2016; MB, personal communication, February 3, 2016).

On the side of the political factors, the differences between the developing world and the developed economies, mainly in Europe, resides on the determination of the authorities to shift to green sources, such as wind, the transition from subsidies to laws and regulations is seen in projects to power the home energy supply, manufacturing processes and transportation systems, including percentages for renewable energies by law (PG, personal communication, April 29, 2016). There are also important ties between the political system in developing countries and the fossil fuels corporations that still exercise power on the policy makers (DP, personal communication, February

9, 2016; RT, personal communication, March 11, 2016).

The social factors are today centered on a more proactive discussion of the need of the renewable energies coming from the general public related with climate change, the prove is the Paris Agreement on climate change actions in 2015, and the stakeholders in companies who are moving to bring environmental image for the consumers, or working under a sustainable perspective to be able to continue having their business operation and financial returns (CL, personal communication, January 20, 2016; PC, personal communication, February 4, 2016).

The findings of these research can be summarized on six conditions that imply opportunities in the wind energy global market: 1. Energy Security and growing consumption; 2. Competitive prices with other types of energy sources; 3. The Paris Agreement on Climate Change 2015 (COP 21); 4. Availability of Experts in all Regions; 5. Technology adaptation to the Regional Wind Conditions; 6. Regional Economic Growth needs to be powered by energy. See figure 4.

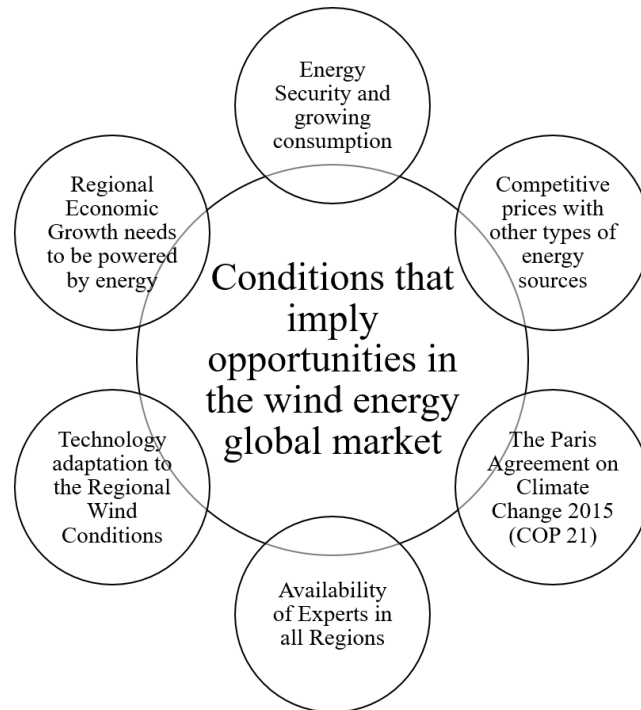


Figure 4 Conditions in the global wind energy market that imply opportunities to compete in.

Discussion of the Research

In Southeast Asia, the traditional factors like governmental policies and tax incentives are still very important to compete, and the image factor as renewable energy is still seeing as the right thing to do, but not commercially viable when it is compared to the traditional sources, under a debatable vision that remains in national administration for development. This represents an obstacle that keep renewable energies, in particular wind energy unable to demonstrate the power of the industry in countries like Malaysia and Indonesia.

Wind energy is today a serious industry, with their own resources, financial

support, big corporations and middle and small scale companies in the sustainable value chain, that brings employment for middle and highly skilled workers, a critical difference from other industries like agriculture and textile manufacturing or electronic assembly.

The industry is moving from the instability that public opinion has brought to wind energy expansion and competitiveness, especially in countries where democracy does not exist or the political regimes are authoritative (CL, personal communication, January 20, 2016). The people interest to receive cleaner energy is still important because it is the base of related services like

applied logistics and engineering education, and it create a more sophisticated market that is mostly related with consumer products but advanced to more specialized products

related with energy, like the preference for hybrid or electric cars by environmentalist consumers (RT, personal communication, March 11, 2016).

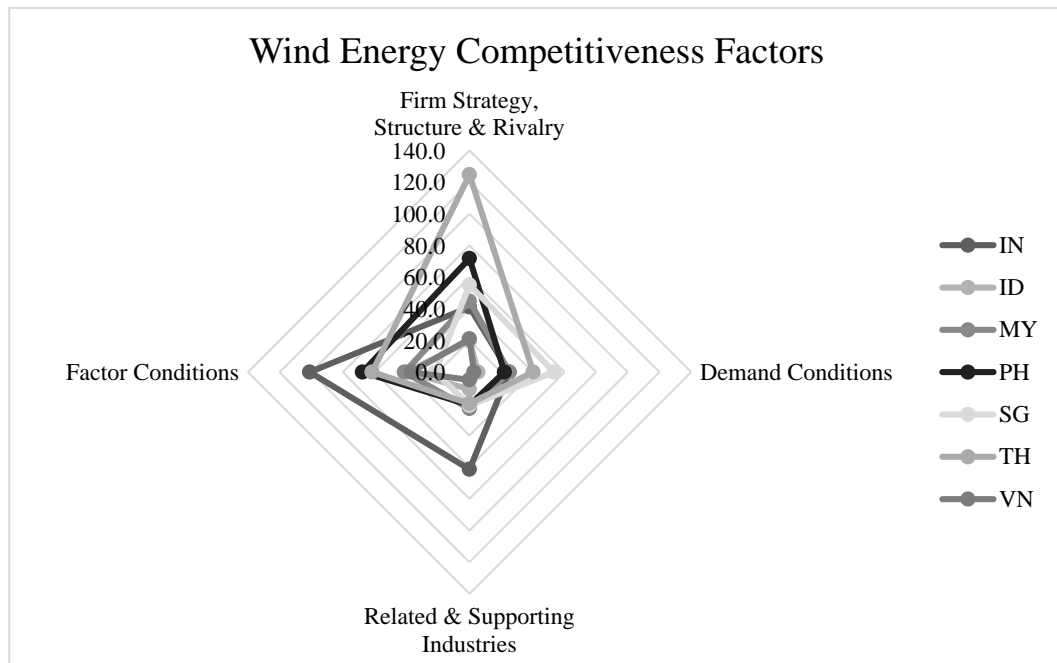


Figure 5 Graphical result of the Porter's diamond for the competitive advantage of nations applied for wind energy for the countries in the study.

In Southeast Asia, countries like Thailand and Philippines are as competitive in terms of factors as India, there are positive possibilities to continue investing in wind energy and make it part of their developing plans for the extended benefits that this industry brings, as China has made by seeing the whole industry as interconnected possibilities to create and maintain business, in terms of investment, services, infrastructure and

products for wind energy growth and maintenance.

Singapore is creating connections to be linked to this energy source by providing research and development for the industry, as it realizes the potential and need for energy for the whole region, despite deciding to invest in tidal energy for its own consumption primary when it comes to renewables it has created its own space to participate and get financial benefits from wind energy.

Malaysia is transitioning in a way that is focusing efforts in other sources of energy different than wind, but this lack of interest in this sector can reduce the chances to find a way to participate in the most dynamic industry in energy sources nowadays.

Indonesia and Vietnam are still weak in the region in different factors, especially in policy adoption, but they have similar characteristics than India, and that creates good starting point that could benefit from more efforts in research and development of technology for renewables and supporting industries from the government.

Implication for business

The Southeast Asian region has fundamental instruments to create an important zone to reach their energy needs and create options to supply other countries once their demand is balanced, this demand is increasing when it is considered per capita, major energy consumption is needed as technology advance, for domestic consumption through digital dependence and the internet of things (IOT); transport, with aerospace industry setting more challenging goals, like flying cars and faster aircrafts; and finally to continue the development pace in development countries for producing goods and power infrastructure. Exporting energy is not new in the Southeast Asian region for business purposes, through fuels from Malaysia and hydro-power from Lao P. D. R., countries in Europe today are exporting energy from their wind energy infrastructure connected to the grid to neighboring countries, like Denmark with a surplus of energy of 40%.

Wind energy represents opportunities from cross border business in the ASEAN zone, to produce parts for the industry, transportation and services for turbines on-shore and off-shore, and the new devices like the airborne wind turbine or off grid systems. Off-shore wind energy presents great opportunities for coastal countries in the region (MB, personal communication, February 3, 2016; RT, personal communication, March 11, 2016).

In order to maintain the development pace in these countries more production and infrastructure need to be powered, wind energy is a clean option that is also cost efficient, labor intensive and extensive in a geographical sense instead of energy plants, this industry creates more markets along the way (MB, personal communication, February 3, 2016).

Investment is becoming more attractive as the technology is bringing new ways to adapt the traditional wind energy system with simple solutions, basically centered on scale.

The most important characteristic of the consumption trend for wind energy is coming from the private industry as the use of turbines is seen as a positive characteristic for sustainability in the whole world, and impact positively in annual reports or consumers acceptance of the firm strategy to grow, there is also a modernity and innovative idea related with the wind energy, specifically with the wind turbine as a symbol, and a psychological relationship between wind energy as a solution for polluted air (RT, personal communication, March 11, 2016).

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Appendices

Interviews

The interviews were conducted based on the semi-structured questions type, with open questions, applying clarification techniques. The objective of conducting the interviews was to test the accuracy of the Porter's Diamond for National Competitive Advantage Model for Wind Energy's current market, bringing the factor environmental concern instead of chance. The media used was face-to-face interview or videoconference. The interviews were recorded.

Prior to each of the interviews it was explain the purpose and confidentiality of the research. For this reason, the audio files were just shared with the research adviser and are referenced in Chapter 4 and Chapter 5 of this paper, mentioning the personal communication, initials of the interviewee and the date when the interview was conducted.

From the total interviews, two were conducted face-to-face in Bangkok, and three were made through videoconference. From the prospected six possible interviews, five were completed, including the main three contacts in the plan, sales of turbine and project management, sales of turbine parts and small turbines in Southeast Asia, and wind energy consultancy for the region.

Participants in the interviews

The profile or the interviewees is explained in this part of the research to demonstrate their characteristics and connection with the research topic.

Interviewee 1. February 9, 2016

DP is a manager consultant in renewable energies in Bangkok, who works for a global consulting agency headquartered in New York City. He has more than 10 years working specifically in renewable energies, including wind energy in Asian projects as the advisor of both the government and the contractor.

Interviewee 2. January 20, 2016

CL is part of an international organization that groups non-governmental organizations, with presence in 94 countries, to monitor international policies to improve sustainable development. The interviewee is based in Oxford, United Kingdom, and has studies in public policies and global development.

Interviewee 3. February 19, 2016.

MB is the sales manager for Southeast Asia of the leading company in wind turbines production and installation in the world. Based in Singapore, he has been working in the industry for more than five years and oversees current projects in Thailand, Vietnam and Philippines. And also coordinates the communication with suppliers from India and China, and the rest of this European organization.

Interviewee 4, February 13, 2016.

PC is the owner and manager of an environmental services company in Latin America, that produces environmental impact assessments for energy projects, including wind farms. She has



participated in the studies analyzing the environmental impacts inner and surrounding areas to develop several projects about wind energy.

Interviewee 5, March 11, 2016.

RT is the business manager for Southeast Asia for a European company that sells turbines off-grid, and other wind energy systems. He has experienced of more than 20 years in Asia in the energy industry, that includes interactions with

Japan and China, and the Southeast Asian region.

Interviewee 6, April 29, 2016.

PG is the head of a governmental institution in charge of the renewable energies policies in Europe, he works in the process of creating new measures and the compliance of those regulations for the implementation of the green technologies for energy supply.

Questions for the interview

Competitiveness in global wind energy: A comparison study between Southeast Asia and India

Semi-structured interview	To be able to discuss emerging findings with the interviewees and test out ideas with them, without being held within a rigid structure to explore on the subject.
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Type of questions:	Open questions, applying clarification techniques.
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Objective of the interview:	Test the accuracy of the Porter's diamond for national competitive advantage model for wind energy's current market bringing the factor environmental awareness instead of chance.
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Media:	Face-to-face / Electronic media (Videoconference)
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Questions:	<ol style="list-style-type: none">1. What are the factors creating a more competitive market for wind energy in a global scale?2. What are the political and social factors that you consider are affecting the wind energy or renewable energies growth or steadiness?3. What are the market and industrial factors that you consider are affecting the wind energy or renewable energies growth or steadiness?4. How is the relationship that you find between democracy (people's demands) and renewable energies adoption in developed countries?
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5. How is the relationship that you find between democracy (people's demands) and renewable energies adoption in developing countries?

6. How important is the environmental concern of the population in a country as a tool for the countries to adapt renewable energies in their energy matrix?

7. Would you have any other thought that you consider relevant to the factors that are currently creating more global competition in wind energy?



How psychological factor influence loss aversion behavior: A unique utility function explanation

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Abstract

How psychological factor influence loss aversion behavior of individuals under uncertainty has been mostly tested for years. However, there is no any specific utility function can describe the way how psychological influence loss aversion behavior of individuals under uncertainty realistically. In current study, a once switchable utility function is presented. This positive odd n power plus linear utility function allows negative cost of game c , proxy of cost of game, to measures the difference between current wealth and certainty equivalent. As the certainty equivalent is difference between expected utility value and risk premium, so, the variable c can reflect both changes on current wealth and certainty equivalent continuously and avoid the subjective weighted probability bias existed in most expected utility functions. Most important point is that this utility function can be used to measure the psychological influence (individual's speed of adjustment to unexpected events and risk as feeling hypothesis) on loss aversion behavior of individuals to risks, represented by n in the utility function. Finally, this unique utility function can be employed empirically to measure both loss aversion behavior and psychological factors under the heterogeneity among individuals towards the risky choices.

Keywords: Psychological factors, Switchable utility function, Loss aversion

Introduction

In real life, there are many factors influence individuals' income or wealth levels, so, how random stochastically in wealth change affect the individual utility function is an important topic in this field, also, expected utility function need to be coherent or can be continuously reflect individual's changing behavior. For example, if an individual subjective weighted probability is kept unchanged in each expected utility function or for every expected outcome, but, the current wealth level of this individual unexpectedly changed, either increased or decreased, based on prospect theory, these unexpected current wealth levels can be treated as new referent points, so, if an individual has loss aversion behavior, one emerged question is how these unexpectedly changes in the current wealth levels affect this individual's decision to risks. In fact, many researchers have found that various utility functions have some limitation to answer this question. For instance, based on Arrow-Pratt's risk aversion and expected utility functions, all the prior studies found that individuals made their choices under uncertainty mostly based on their risk aversion, or loss aversion, wealth levels and the difference between expected return and certain equivalent, so, there were heterogeneous risky choice behavior among individuals, they were either risk-aversers or risk-takers depended on their risk preference, referent points and the curvatures under the utility functions applied in these studies. As the results, the need of a unique utility function which can be used to express both risk aversion and risk taking behaviors under specified conditions is more urgent. (Rothschild

and Stiglitz, 1971; Gorden et al., 1972; Graves, 1979; Kihlstrom et al., 1980; Bell, 1988; Cox and Sadiraj, 2002; Abdellaoui et al. 2007; Norstad, 2011; Abbas and Bell, 2011; Martin von Gaudecker et al., 2011; Giorgi and Post, 2011; and Ray and Robson, 2012)

Contrast to the enriched researches on weighted probability under the expected utility functions, and loss aversion behavior under the prospect theory (Kahneman and Tversky, 1979), another important factor, rooted in the same theory: the psychological perspective, has not been emphasized in prior researches. This psychological factor has not been encapsulated into any utility function form to explain individuals' loss aversion behavior and risk taking behavior. Most researches which studied the relationship between psychological factor and risk aversion or risk taking behavior were tested either in labs, in field experiments, or just described in theoretical frameworks. For example, some prior researches stated that psychological principles or factors should be included into the studies on loss aversion behavior and decision making process under uncertainty for the subjective weighted probability in various expected utility functions (Loewenstein et al., 2001; Camerer, 2005; Novemsky and Kahneman, 2005; Shleifer, 2012 and Barberis, 2013). Their conclusions revealed that the psychological factors could affect not only the decision making process, but also influence the speed of these decision process. Furthermore, if risks are psychological feelings of individuals, then, these psychological feelings could affect the individuals' behavior under ambiguity.

In the current study, I present a positive odd n power plus linear utility function and try explain the individuals' loss aversion behavior under uncertainty by including psychological factor into the consideration so as to make the description of individual loss aversion behavior be more realistic and overcome some subjective weighted probability biases under the expected utility function forms.

Literature reviews

Expected utility function always be used to state the individuals' decision when the individuals must either maximize the expected utility value by choosing between the risky and riskless assets under mean-variance measurement, or minimize the variance for his or her portfolios subject to some constraints.

Pratt (1964) pointed out that individuals or decision makers have risk aversion properties. To avoid such risk, he or she would use cash or certain equivalent to exchange. The cash equivalent or certainty equivalent is the amount remained between expected value minus risk premium. Under the expected utility function theory, there are two risk aversions definitions, one is absolute risk aversion and another is relative risk aversion, what are expressed as $-U''/U'$ and $-wU''/U'$, here, the w is the initial wealth of individual. However, the expected utility was meaningful if and only if it had concavity properties with the $U'' < 0$, and $U' > 0$. These properties implied that the expected utility function must be quadratic function. But, these properties may be wrong, for example, both the absolute risk aversion and

relative risk aversion are increasing under some circumstances.

Based on Arrow-Pratt's risk aversion and expected utility functions, Rothschild and Stiglitz (1971), Gordon et.al. (1972), Kihlstrom et al. (1980), and Bell (1988) argued that the absolute and relative risk aversion under quadratic utility functions were not sufficient to explain some experimental results and individuals' behavior under the change of their wealth levels. For instance, individual could save more or less under the uncertainty of return of saving rate, or they may consumed less even their wealth levels increased. Supported by Abbas and Bell (2011), Graves (1979) pointed out an important concept "safety first principle". This principle meant that individuals tried to express their increasing relative risk aversion behavior to minimize the probability to fall below the "disaster" level of current wealth. As the result, the bet must be small enough relative to his or her "disaster wealth level", then, he or she may be indifferent between taking the bet or not. But, if the bet was larger relative to his or her "disaster wealth level", then, he or she might hesitate to take the bet. Cox and Sadiraj (2002) stated that expected utility theory could not provide a coherent positive theory of risk averse behavior and there was calibration problem based on assumed concavity and additive on initial wealth to income. The authors also cited that a concave expected utility model implied that people were approximately risk neutral when stakes were small, so, the expected utility function could not provide a plausible confirmation of risk aversion over modest stakes which was not consistent with expected utility theory. These results implied a possible switching preference when the wealth

reached a certain level. Norstad (2011) focused on the initial wealth and expected utility theory under risk aversion condition. He stated that individuals evaluated an investment was attractive or not based on the difference between certainty equivalent and their current wealth. He concluded that there was no any of utility function could be used to describe all investors or even any individual's behavior. It was entirely reasonable for an investor's attitude to risk when such risk was varying with the amount of wealth. As, the investor's risk tolerance may change from time to time, but, these changes would likely be far more gradual than those with a constant risk aversion. However, in his article, Norstad did not give out the any general expression of relationship between the certainty equivalents and changing initial wealth levels. So, individual's assessment to risk was substantially influenced by their circumstances and conditions.

To address heterogeneous behaviors among individuals, Kahneman and Tversky (1979, 1992) developed and advanced the prospect theory, the authors allowed individual to choose between different assets with risk. The individual first evaluated the possible outcome of the decision, and arranged the outcomes under some rules, then, the individual would set a reference point to evaluate the possible worst losses and best gains. Therefore, they would behave to choose the higher utility as if they could calculate the value based on the possible outcomes according to their subjectively probability. The authors concluded that the interaction for overweight on small probability of gain and underweight on large probability of loss based on concavity-convexity of the value and weighting function implies four patterns

of risk behaviors: risk averse for gain under moderate or high probability, risk seeking for loss under moderate or high probability, risk seeking of gain under small probabilities and risk aversion of loss under small probabilities. Hereafter, there were many researches focusing on four main parts under the prospect theory: reference dependence; loss aversion; diminishing sensitivity; and probability weighting (Barberis, 2013).

For example, Abdellaoui et al. (2007) pointed that there was about 40% of total subjects included their study with concave utility functions for losses. This fact had not been presented in any form of utility functions. Further, the convex utility in loss domain under the prospect theory was a bias when subjective probabilities for large loss just only above $1/3$, this made risky loss to be more attractive when compared with the certain equivalent, as the result, the curvature was expressed as risk seeking under the loss domain. Moreover, the authors stated that the loss aversion definition under the prospect theory had a main drawback: the loss aversion cannot be separated from the curvature of utility functions, so, how to measure the individual's attitude to the losses cannot be summarized generally. These conclusions were echoed by Martin von Gaudecker et al. (2011). They found that the curvature of utility function and loss aversion behavior were important for individual to make decision under risks, however, many individuals did switch their risk preferences during the test, while some other seems to be risk neutral. So, they concluded that risk preferences in their experiment were very heterogeneous.

According to the prospect theory, individuals do not evaluate their wealth at the end or final states, rather, they prefer to evaluate their gains or losses relative to their current wealth levels in each state. However, whether the reference points are constant or not, in other words, whether the reference points are exogenous or endogenous have been discussed in prior studies. For example, De Giorgi and Post (2011) argued that in financial field, the state-dependent preference structure was more reasonable, as investors usually compare their prospect outcomes with their reference points in the same state. The authors stated that if the reference point was endogenous, then, the loss aversion could not affect individual behavior, however, if the reference point has an exogenous element, for instance, the reference point included the rate of return on riskless assets, then, the loss aversion did influence individual behavior. Finally, the authors concluded that the state-dependent reference point model could cause different behavior among individuals in each state, such variety on behaviors was depended on the difference between the reference points and current wealth levels as well as the speed of individual's adjustment to new information or unexpected events.

From psychological perspective, Loewenstein et al. (2001) and Shleifer (2012) studied the speed of individual responses to the new information or unexpected events based on different hypotheses. Loewenstein et al. (2001) presented the risk as feelings hypothesis. Under this hypothesis, the feelings as one factor was included into the decision process under uncertainty. By explaining the interaction between cognitive evaluation and feelings towards risks, the

author argued that people usually treated risks at two steps: evaluate the risk cognitively and react emotionally, also some people might learn quickly to some types of risk, while others did not. These results were underpinned by Shleifer (2012). Derived from "Heuristics and Biases" under the prospect theory, the author reviewed and classified the thinking systems into fast (system 1) and slow (system 2) types, and pointed out that the heuristics (anchoring and representative heuristics) and biases (overweight on small probabilities of gain and underweight on large probabilities of loss) could accelerate people's thinking, but the results were always incorrect. So, to some extent, the risk as feelings hypothesis or fast thinking system could explained risk taking behavior under certain situations. The phenomenon of risk taking behavior could be explored more deeply by the relationship between the psychological response and loss aversion. Novemsky and Kahneman (2005) and Camerer (2005) analyzed the influence of psychological response on loss aversion. Novemsky and Kahneman (2005) stated that there were no loss aversion behavior under three situations: if the goods that provide same benefit but with different properties could be exchanged without loss aversion; if the goods could be exchanged intendedly (endogenous), such behavior could not be categorized as loss aversion; if the loss aversion in balanced risks, then, there was no risk aversion, for example, when risky willingness to accept equals to the willingness to accept. For example, if the income effect, which was the difference between risky selling to the selling was too small to be negligible, then, there is no risk aversion, so, the loss aversion to

risk could not be applied entirely in concavity under expected utility functions.

Theoretical framework

As there was a bias when subjective weighted probability under the expected utility functions (Abdellaoui et al., 2007), and the individual risk aversion behavior may switch between risk averter, risk neutral and risk taker according to the difference between their current wealth levels and certain equivalent (Graves, 1979; Cox and Sadiraj, 2002; Norstad, 2010, Abbas and Bell, 2011; Martin von Gaudecker et al., 2011), so, any theoretical or empirical study on individual risk aversion behavior should not only focus on absolute, relative risk aversion and subjective outcomes, but also, take the psychological responses into the study, because any unexpected event, such as news or information what may cause unexpected impact on their incomes, could psychologically affect the individual risk aversion behavior either in fast, slow

responses or even no responses under the risk neutral or under no loss aversion conditions (De Giorgi and Post, 2011; Loewenstein et al., 2001; Novemsky and Kahneman; 2005; Camerer, 2005; Shleifer, 2012; Barberis, 2013).

The model in current study is not only built on several previous studies about the utility functions and investor's risk aversion behavior, but also included psychological responses, for example, under the risk as feelings hypothesis there are two parts: the degree of psychological impact on unexpected change of income (evaluate the risk cognitively) and psychological response (react emotionally), so, how these two parts can be used to explain the individual's risk behavior more realistically under the heterogeneous referent points and risk preferences of individuals?

The hypothesis:

The psychological responses do influence the individual loss aversion behavior in both loss and gain domains.

The Model of this study is:

$$U(c) = a(c)^n + b(c), a > 0, b > 0, n = 3, 5, 7, 9, 11, \text{ and } n \text{ will not equals to } 1, 2, \text{ or even numbers;} \quad (1)$$

Where c = current wealth – certainty equivalent

Where a, b are real number. a represent the psychological impact degree on unexpected events (income effects hereafter), which is an absolute value of the difference between expected value of outcome on subjective estimation of individuals and the fair or objectively outcomes, or each initial wealth level (in this study), big value of a means potential high psychological impact exists

cognitively, which implies that the difference between the expected value of outcome and actual value of outcome is higher; c means "cost of game" of individual; n stands for individual's psychological factor, it is measurement for psychological factor to risk changes (react emotionally): the slower adjustment to unexpected events emotionally, the less score he or she has.

Property 1: for every rational individual:

$$U'(c) = an(c)^{n-1} + b > 0, an(c)^{n-1} > -b; U''(c) = an(n-1)(c)^{n-2} < 0, \text{ only for } c < 0; \quad (2)$$

Property 2: Arrow-Pratt Absolute Risk Aversion and Relative Risk Aversion:

$$R_A(c) = -U''(c)/U'(c) = - [an(n-1)(c)^{n-2}/an(c)^{n-1} + b] \quad (3)$$

$$R_R(c) = -c * U''(c)/U'(c) = - [c * an(n-1)(c)^{n-2}/an(c)^{n-1} + b] \quad (4)$$

Property 3:

$$dR_A(c)/d(c) = - \{ an(n-1)(c)^{n-3} * [b(n-2) - an(c)^{n-1}] / (an(c)^{n-1} + b)^2 \} \quad (5)$$

When $n =$ positive odd integer number, $c < 0$, then,

$dR_A(c)/d(c) < 0, = 0, > 0$, will be depended on $[b(n-2) - an(c)^{n-1}] > 0, = 0, < 0$; (DARA, Indifferent, or IARA);

When $n =$ positive odd integer number, $c > 0$, then,

$dR_A(c)/d(c) < 0, = 0, > 0$ will be depended on $[b(n-2) - an(c)^{n-1}] > 0, = 0, < 0$; (DARA, Indifferent, or IARA);

Property 4:

$$dR_R(c)/d(c) = -[b * an * (n-1)^2 * (c)^{n-2} / (an(c)^{n-1} + b)^2]; \quad (6)$$

When $n =$ positive odd integer number, $c < 0$, then, $dR_R(c)/d(c) > 0$, (IRRA);

When $n =$ positive odd integer number, $c > 0$, then, $dR_R(c)/d(c) < 0$, (DRRA);

When $c = 0$, all would be Constant Absolute and Relative Risk Aversion (CARA, CRRA, or Indifference);

Property 5:

When $c < 0$, and $n =$ odd positive integer, an individual with such utility function is risk averter, when, $c > 0$, there no any risk

avertter whenever n is odd or even positive integer, so, only $n =$ odd positive integer is feasible for both negative c and positive c .

Table 1 Individual risk aversion property

	ARA	RRA	Individual RA property
When $c < 0$, $n = \text{odd}$	DARA , CARA, IARA	IRRA	Risk Averter
When $c > 0$, $n = \text{odd}$	DARA, CARA , IARA	DRRA	Risk Lover

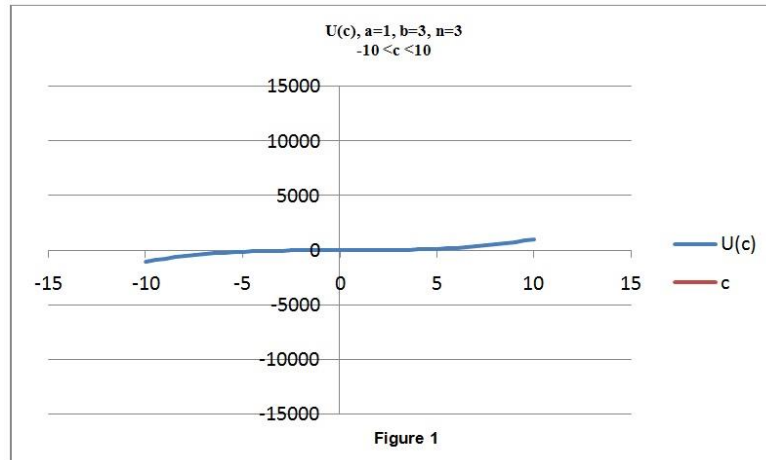
Note: see proof in Appendix A

Property 6:

From the equation (1) and (2), a , b are determinants of slope of utility function, the " n " stands for psychological factor to risk changes. a , b , n together will show properties of each individual's response to cost of game level in utility function. For example, If an individual, expected utility value is much different with his or her each initial wealth level, he or she may or may not exhibits obvious sensitivity to cost of games changes, which means that he or she may or may not take a bet even if the bet is fair to him or her given that he or she response slowly on unexpected changes. However, if his or her adjustment to unexpected events is fast, such individual will take the bet even if it is not fair game to them based on same difference between the expected value and the each initial wealth levels.

Discussions

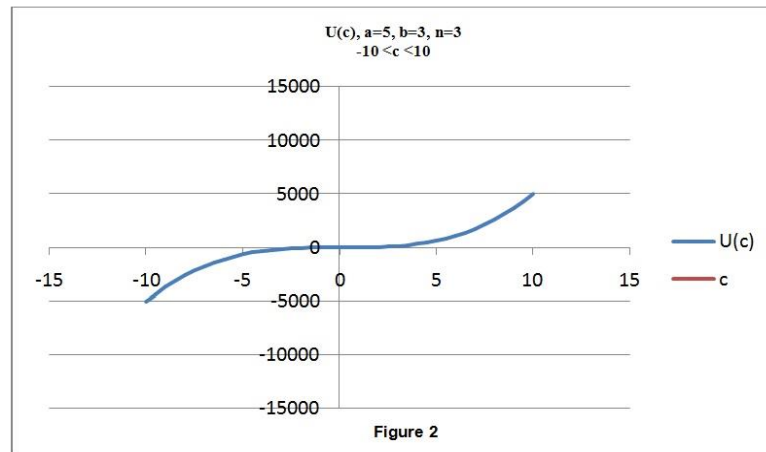
Figure 1 shows that when the cost of game is small enough and the individual with lower degree of psychological impact a and slower response to unexpected events n , his or her utility function looks like a straight line, this means that such individual is indifferent between taking the bet or doing nothing (Norstad, 2010; Loewenstein et al., 2001; Shleifer, 2012). Figure 2 reveals that when an individual with higher degree psychological impact (a equals to 5), other conditions remained), then, his or her utility function becomes more volatile: when the cost of game is negative, his or her utility function is a concave curve, and the utility value is near to or equal to zero when the cost of game c changed between -5 and +5, so, the higher degree psychological impact shorten the span of indifference on cost of game for an individual.



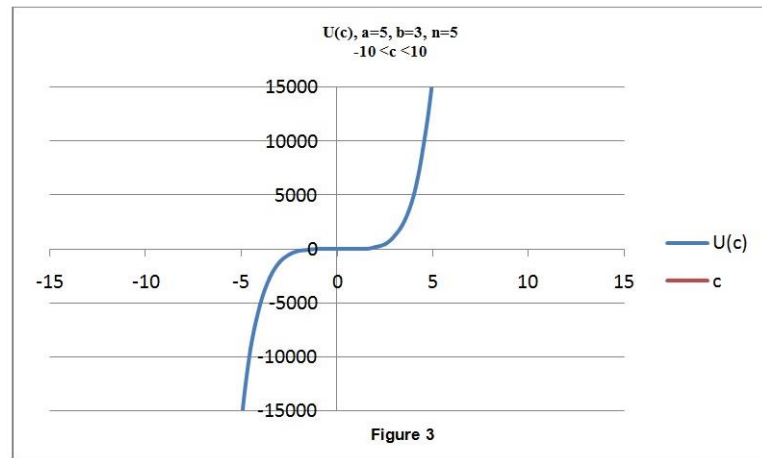
Figures 1 Simulation of interactions among a , b , n and c (Cost of game)

When compare the Figure 3 to Figure 2, there is not only psychological impact, but also psychological factor to risk changes. When an individual with higher adjustment speed to the risk changes (n equals to 5, not 3 in Figure 2), this

individual's utility function become more sharp, and the span for switch points from concave (he or she is a risk averter) in negative region domain to convex in positive region (he or she is a risk lover) is much shorter than that



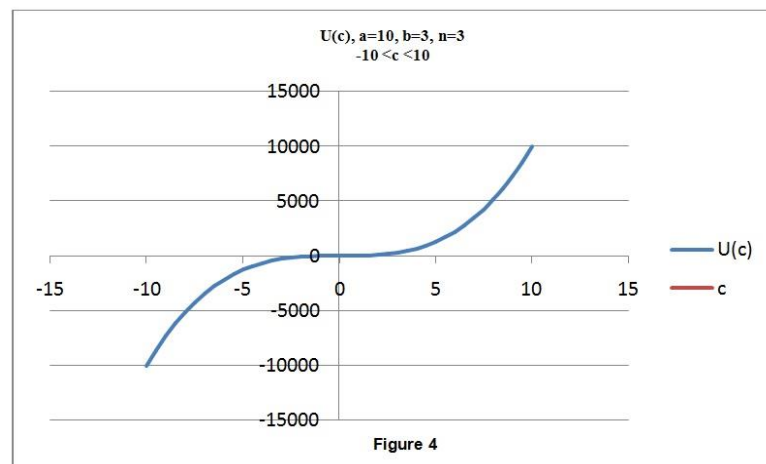
Figures 2 Simulation of interactions among a , b , n and c (Cost of game)



Figures 3 Simulation of interactions among a , b , n and c (Cost of game)

In Figure 2. This result suggest that an individual adjust his or her “disaster wealth level” higher when his or her current wealth is less than the cost of game, but such “disaster wealth level” is

adjusted lower when his or her current wealth is more than the cost of game (Graves, 1979; De Giorgi and Post, 2011).



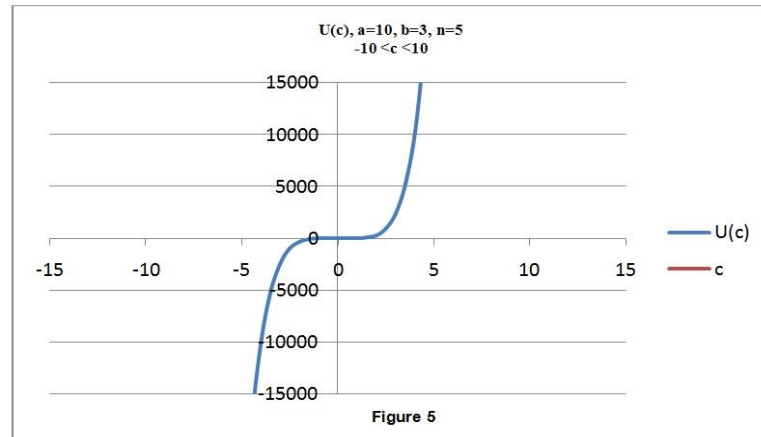
Figures 4 Simulation of interactions among a , b , n and c (Cost of game)

From Figure 4 and Figure 2, when an individual with same adjustment speed on psychological response, but the psychological impact doubles, which

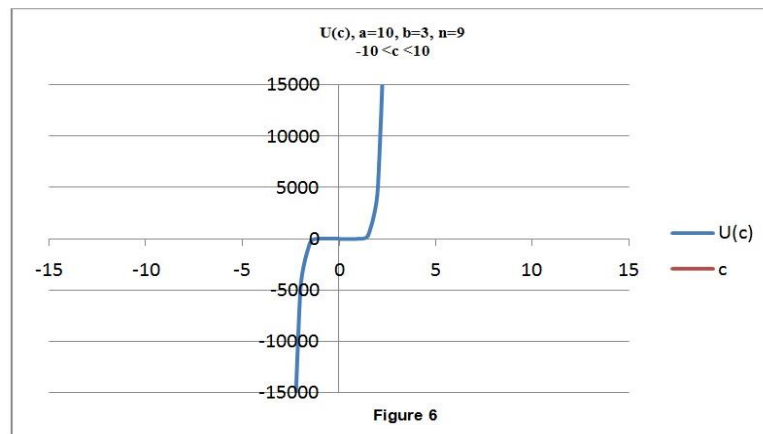
implies that the individual cognizes the unexpected events more seriously). Under this condition, this individual’s utility function changed to be more

volatile in slopes either in negative region or in positive region of the utility functions, the range of switch points also

become shorter in Figure 4 than that in Figure 2.



Figures 5 Simulation of interactions among a , b , n and c (Cost of game)



Figures 6 Simulation of interactions among a , b , n and c (Cost of game)

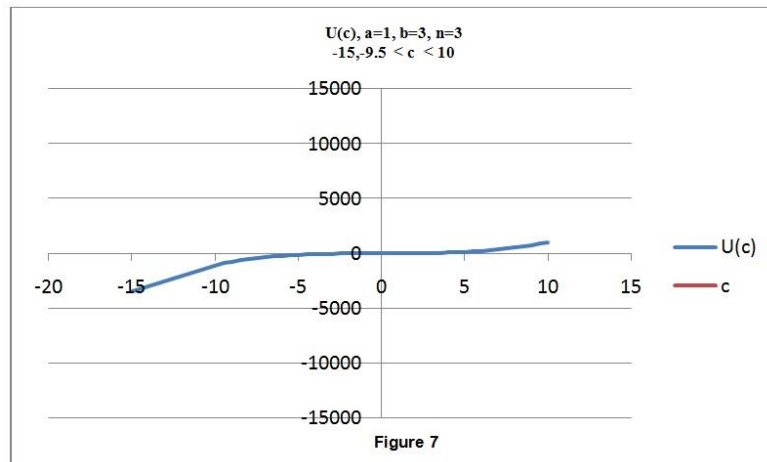
Figure 5 and 6 discover that when the degree of psychological impact doubled, but associated with different psychological response speed of adjustment to the risk changes, the utility function of this individual become much

more fluctuated when the cost of game still switched between -10 and +10.

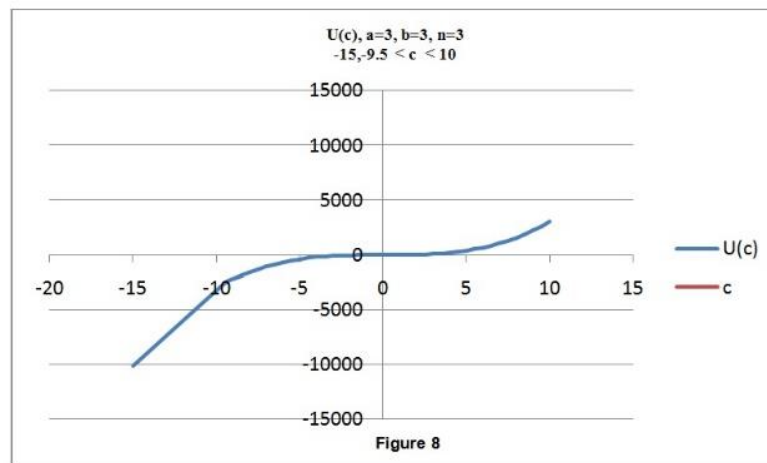
Figure 7 and Figure 8 demonstrate that when an individual's current wealth suddenly changed in negative way, so, the cost of game suddenly become more negative than that in prior figures. For

example, an individual the cost of game suddenly change from -10 and +10 to be -15 to +10. Compare the Figure 7 and Figure 1 (with same degree of

psychological impact and same speed of adjustment to risk changes), his or her utility function become



Figures 7 Simulation of interactions among a , b , n and c (Cost of game)



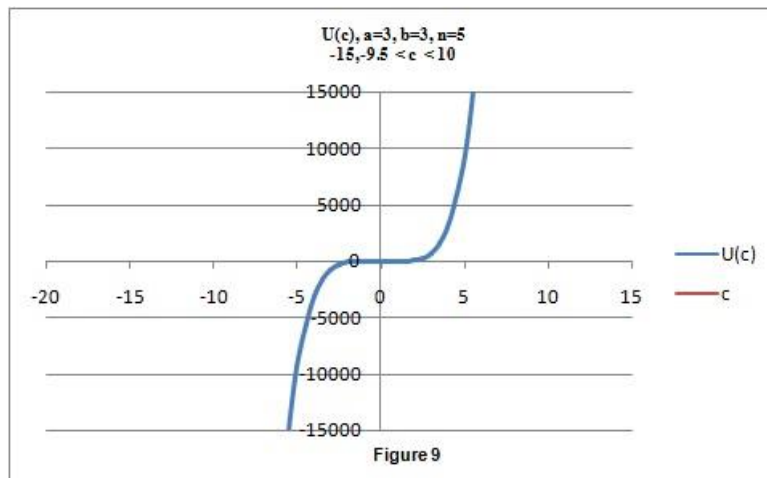
Figures 8 Simulation of interactions among a , b , n and c (Cost of game)

More concave in the negative domain, which implies that this individual is not willing to take an investment more when

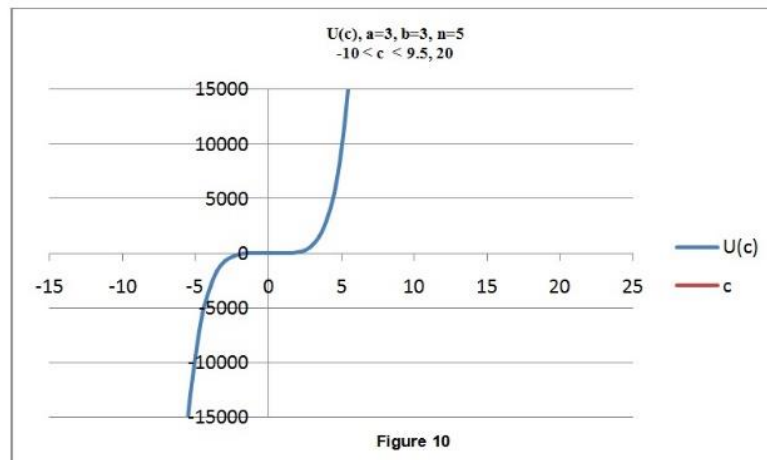
his current wealth is much less than the cost of game (Gordon, 1972, Rothschild and Stiglitz, 1971; Graves, 1979;

Abdellaoui et al., 2007; Abbas and Bell, 2011). Figure 8 shows that when there is a higher degree psychological impact, the curve of utility function is changed in both side: his or her utility function become more in concave in negative side and more in convex in positive side. But,

the slopes are different between that in negative and that in positive sides: the slope in negative domain is higher than that in positive domain, such results reveal that an individual take unexpected change in wealth or income more seriously and become more conservative.



Figures 9 Simulation of interactions among a , b , n and c (Cost of game)



Figures 10 Simulation of interactions among a , b , n and c (Cost of game)

Figure 9 and Figure 10 disclose the “extreme” effects on suddenly loss and suddenly gain in current wealth respectively. For instance, if other condition are controlled, when an individual become suddenly worse in his or her current wealth, he or she may become more aggressive on his or her investment decision, so as to recover his or her loss to the “disaster wealth” point as soon as possible, this feature could be reflect by the degree of slopes in both Figures. In Figure 9 and Figure 10, the costs of game are almost same in negative side, but lower in positive side in Figure 10, this phenomenon express that when an individual with sudden gain in current wealth, then, the individual may become more aggressive in investment decisions. These results also support the findings of Graves (1979) that if an individual’s wealth and bet size are double, such individual may be more likely to take the bet, because he or she would have more left even if the outcome is lose (Loewenstein et al., 2001; De Giorgi and Post, 2011; Shleifer, 2012).

Conclusions

The current paper presents an unique utility function to fill the gaps existed in prior studies that: even there is at least 40% of individual with concave utility functions under loss domain, no specified utility function can be used to represent these populations (Abdellaoui et al., 2007); moreover, there is no utility function which includes psychological perspectives when analyze the loss aversion behavior (Loewenstein et al., 2001; Novemsky and Kahneman, 2005; Camerer, 2005; Shleifer, 2012).

The utility function in current study discovers that the psychological factors (evaluate the risk cognitively and react to risk emotionally) do influence loss aversion behavior. For example, when other conditions are controlled, an individual who cognize the unexpected events more seriously, the slope of utility function become more vertical in the negative domain, which means that this individual want to recover his or her loss to the “disaster wealth” point as soon as possible. Meanwhile, if other condition are kept, the faster response to risk changes, the more vertical of slope of utility function will be, this result shows that individual react more faster emotionally to risk changes, so, he or she become more risk taking. Generally, the higher degree of psychological impact (how seriously individual cognize the risks) and higher level of psychological response (how fast individual react to risk changes emotionally) tend to switch individuals’ risk averter to be risk taker under a certain difference between current wealth and certain equivalent, or vice versa.

Finally, the simulation results by using the utility function in current study are aligned with many prior researches, for instance, when current wealth levels fall below exogenous referent points, individuals may switch their risk aversion behaviors so as to follow the “safety first principle” (Gordon et al., 1972; Graves, 1979; Abdellaoui et al., 2007; De Giorgi and Post, 2011; Abbas and Bell, 2011). At the same time, the current study avoid the problems existed in prior studies, such as the increment simultaneously for both absolute risk and relative risk aversion under quadratic functions, and the biases from subjective

weighted probabilities under expected utility functions.

Furthermore, the utility function in current study is also aligned with risk lover properties under the prospect theory (See the Appendix B), and this utility function can be employed empirically to measure both loss aversion behavior and psychological factors under the heterogeneity among individuals towards the risky choices. For instance,

theoretically, future researches could focus on the measurements of psychological factors (a and n), while, empirically, financial institutions, including banks could use this utility function to evaluate each parameter for different classes of clients, which are categorized by their incomes, ages, and habits, so as to estimate their risk preference and psychological factors more realistically.

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Appendix A

$$U(c) = a(c)^n + b(c) \quad a > 0, b > 0, n = 3, 5, 7, 9, 11, \text{ and } N = 1, 2, \text{ even numbers};$$

(1)

$$U'(c) = an(c)^{n-1} + b > 0, an(c)^{n-1} > -b; U''(c) = an(n-1)(c)^{n-2} < 0 \text{ only for } c < 0;$$

(2)

$$R_A(c) = -U''(c)/U'(c) = -[an(n-1)(c)^{n-2}/an(c)^{n-1} + b]$$

(3)

$$R_R(c) = -c \cdot U''(c)/U'(c) = -[c \cdot an(n-1)(c)^{n-2}/an(c)^{n-1} + b]$$

(4)

$$d R_A(c)/d(c) = -\{an(n-1)(c)^{n-3} * [b(n-2) - an(c)^{n-1}]/(an(c)^{n-1} + b)^2\}$$

(5)

When $n =$ positive odd integer number, $c < 0$, then,

$d R_A(c)/d(c) < 0, = 0, > 0$, will be depended on $[b(n-2) - an(c)^{n-1}] > 0, = 0, < 0$; (DARA, Indifferent, or IARA);

When $n =$ positive odd integer number, $c > 0$, then,

$d R_A(c)/d(c) < 0, = 0, > 0$ will be depended on $[b(n-2) - an(c)^{n-1}] > 0, = 0, < 0$; (DARA, Indifferent, or IARA);

Proof:

$$\begin{aligned} d R_A(c)/d(c) &= \{ - [an(n-1) * (c)^{n-2} / (an * c^{n-1} + b)] \}' \\ &= - \frac{[an(n-1)(n-2)(c)^{(n-3)} * (an(c)^{(n-1)} + b)] - [an(n-1)(c)^{(n-2)} * an(n-1)(c)^{(n-2)}]}{[an(c)^{(n-1)} + b]^2} \\ &= - \frac{[an(n-1)(c)^{(n-3)} * (b(n-2) - an(c)^{(n-1)})]}{[an(c)^{(n-1)} + b]^2} \end{aligned}$$

As $[an(n-1)(c)^{(n-3)}]$ always > 0 , so, the sign of $d R_A(c)/d(c)$ will be dependent on $[b(n-2) - an(c)^{(n-1)}]$

$$d R_R(c)/d(c) = -[b * an * (n-1)^2 * (c)^{n-2} / (an * (c)^{n-1} + b)^2]; \quad (6)$$

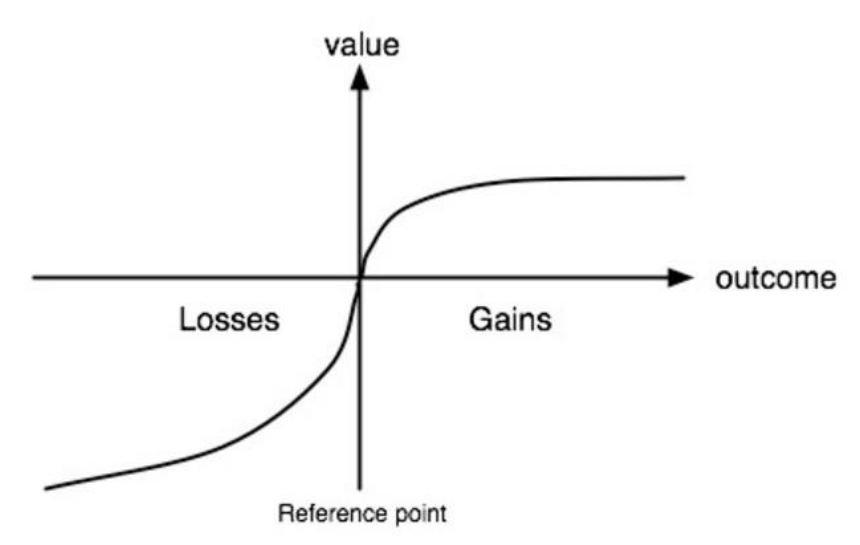
Proof:

$$\begin{aligned} d R_R(c)/d(c) &= \{ - c * [an(n-1) * (c)^{n-2} / (an * c^{n-1} + b)] \}' \\ &= - \frac{[an(n-1)(n-1)(c)^{(n-2)} * (an(c)^{(n-1)} + b) - an(n-1) * (c)^{(n-2)} * an(n-1)(c)^{(n-1)}]}{[an(c)^{(n-1)} + b]^2} \\ &= - \frac{[b * an * (n-1)^2 * (c)^{(n-2)}]}{[an(c)^{(n-1)} + b]^2} \end{aligned}$$

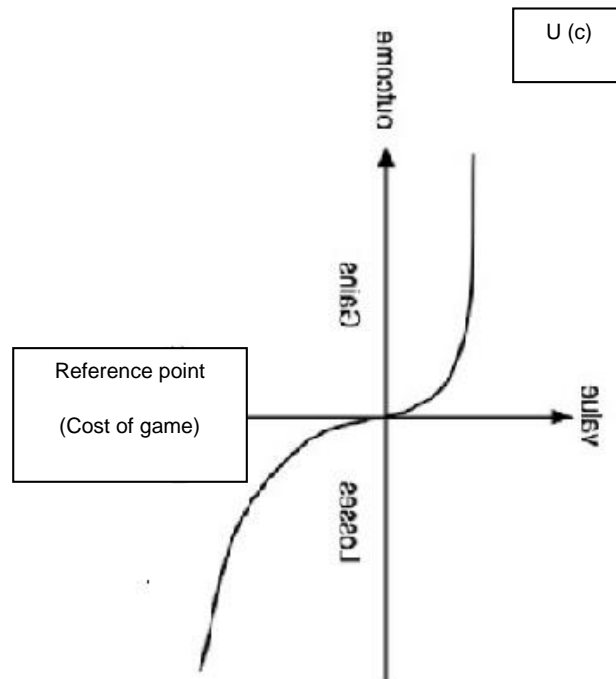
$n = 3, 5, 7, 9, 11$, When $c < 0$, then, $d R_R(c)/d(c) > 0$, when, $c > 0$, then, $d R_R(c)/d(c) < 0$



Appendix B



- 1) Vertical flip and
- 2) Turn 90 degree to the left, get the following:



Enhancing core leadership capacity, organization commitment through leadership building intervention an action research of AAA realty Co., Ltd.

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Abstract

This research aimed to describe and explain the research and demonstrate how OD can be used in an organization. A mix research method (quantitative and qualitative) was employed. This data were collected from AAA Realty Company, during the pre-ODI and post-ODI periods. There were 60 participants included in the intervention, including 40 non-managerial employees and 20 managers. The quantitative data were analyzed using SPSS while qualitative data were analyzed using content analysis. The result indicated that the OD process was an excellent first step to organizational change at AAA Realty. The OD process and intervening activities made substantive changes in core leadership capacity and organization commitment in the organization, and provided direction for future changes and programs to be implemented to help AAA Realty continue to manage its growing successfully. The OD had positive outcomes for the employees and managers as well as the full organization. AAA Realty has emerged from the OD process a stronger organization and more able to manage its rapid rate of expansion. The organization is recommended to continuously convey the improvement of core leadership capacity. In terms of further study, developing a robust theory of core leadership capacity and empirical research into the effectiveness of AI and WBL are valuable. These could benefit more knowledge to improve the organization OD theory.

Keywords: Leadership, Leadership style, Leadership capacity, Organization, Organizational change, Organization commitment, Organization development (OD), Organization development intervention (ODI)

Introduction

The company in the case study operates within the national real estate industry in Thailand. Thailand is expected to benefit in terms of commercial and industrial real estate due to the introduction of the Asean Economics Community (AEC), seeing increased inbound real estate investment along with general investment from China and Singapore (CBRE, 2015). Analysis suggests that this market has slowed, although it is also improving. For example, it is estimated that 34,670 fewer condominium units were launched in 2015 compared to 2014, largely due to economic uncertainty and potential changes in government policy that have limited the market (Colliers International, 2015a). However, there is still relatively high demand, and many developments at the high end of the market are oriented toward foreign buyers, especially from China, Singapore, and Malaysia (Colliers International, 2015a). In provincial areas and smaller cities like Hua Hin, Cha Am, and Pranburi, there is a significant slowdown in demand and large stocks of unsold properties (Colliers International, 2015b). This is the case even in highly popular coastal cities like Pattaya, where only 8,500 condominium units were launched in 2015 (Colliers International, 2015c). However, there are significant numbers of condominiums and other units under development, as developers were trying to finish projects before a 2016 change in tax laws (Colliers International, 2015c). These unsettled conditions mean that it is likely to be harder to for real estate agents to make sales, because there is a relative oversupply compared to demand and few new units coming on the market. The organizational system of this research is AAA Realty Co., Ltd. AAA

Realty Co., Ltd was established in 2000 with the slogan “Your Reliable Partner”. It has been one of the most competitive real estate agents in Thailand since its foundation in 2000. The company offers a variety of estate management services for investors, including real estate brokerage, sales and project management, property consultancy, and rental property management. AAA Realty Co. Ltd has two offices in Bangkok and Hua Hin, and is currently in the process of expanding to Chiang Mai. The company currently employs about 60 employees.

AAA Realty co., ltd has significant opportunities related to growing demand for estate agents due to an accelerating boom in the Thai property market. The firm’s strengths position it well to take advantage of these opportunities. For example, it has a high level of loyalty from customers, resulting in relatively predictable demand inquiry for both buying and selling. The firm’s database management and database marketing position is exceptionally to taking advantage of this market growth, allowing it to connect with customers immediately and providing extensive information about its properties, pulling clients. These strengths are directed toward the company’s vision and strategies, which focus on database marketing, market presence and customer relationship management.

Thus, if the firm can enhance core leadership capacity of their employee, especially at the management level which is a core skill of the individual to lead himself/herself, team, and organization to reach personal and company targets and directly increase organization commitment. Furthermore, enhancing in organization commitment is also

significant variable to improve company performance which is directly related to company productivity and employee performance including committed to organization, which will be well positioned to expand beyond its current market position.

The aim of this research is how AAA Realty Co., Ltd can enhance in core leadership capacity and organization commitment by through organization development intervention which is modifying its organizational structure and activities. Currently, the organization has opportunities for further growth, which it is well positioned to take advantage of due to organizational strengths in marketing, information technology use, and relationship management. This means that the organization's long-term expansion and health could be improved by adjusting the organizational culture and other factors. In order to enhancing organization this situation an organizational development (OD) perspective will be used, incorporating action research undertaken in cooperation with the organization's leaders.

The aims of the paper are to assess and diagnose the existing situation of the focal organization in core leadership capacity and organization commitment. To identify design and conduct an appropriate organization development intervention (ODI) based on the initial organizational assessment on core leadership capacity and organization commitment and to investigate their statistically significant relationship and the statistically significant mean difference between pre ODI and post ODI in core leadership capacity and organization commitment.

Literature review

Leadership theory

The core organizational process studied in this research is leadership. One of the simplest definitions of leadership is “a process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2010, p. 3).” More generally, definitions of leadership tend to fall into trait-based definitions (defining a leader by their own fundamental characteristics), process-based definitions (defining leadership as an activity or something that people do), or role-based definitions (defining leadership as an aspect of the individual's position within an organization or network) (Rowe & Guerrero, 2011). Of these different definitions, the process-based definitions, such as that provided by Northouse (2010), are the most flexible because they do not assume that any individual is or is not suited to leadership by virtue of their personality or position (Rowe & Guerrero, 2011). Instead, leadership becomes a skilled process that can be learned, taught, and improved, given appropriate motivations and needs (Northouse, 2010). This is a critically important distinction for OD and organizational change activities generally, since without envisioning leadership as a process it becomes difficult to incorporate leadership development into organizational change (Hall & Hord, 2001).

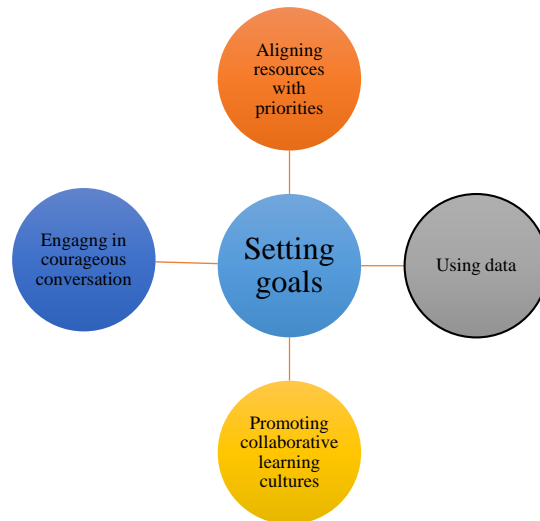
Leadership development interventions are a common focus for OD, because the leadership process within the organization is both critically important to the organization's success and a difficult area to ensure success (Cummings & Worley, 2009). There are

different types of leadership development interventions, which may be directed toward leadership role preparation, succession planning, teach the organization's values (particularly to new leaders or external hires), and build and develop leadership capacity and skill (Cummings & Worley, 2009). Leadership development programs are often complex and multi-layered, focusing on both teaching operational skills such as so-called "soft skills" and integrating organizational values and practices (Day & Harrison, A multilevel, identity-based approach to leadership development, 2007). For example, day and Harrison (2007) describe a holistic, multilevel leadership development approach, where the skills focus varies depending on the level of the organization. In this approach, employees beginning the leadership role (such as non-managerial and front-line supervisor employees) receive individual skill development training, while leadership development becomes more focused on the collective and organizational needs as the individual

climbs the ladder (Day & Harrison, A multilevel, identity-based approach to leadership development, 2007). This is only one example of how leadership development may be implemented within the organization. For the present study, emphasis will be placed on two aspects of leadership: leadership styles and core leadership capacity.

Core leadership capacity (five sub-dimensions)

The required core leadership capacity for an organization may vary depending, for example, on the type and goals of the organization and its organizational structure and hierarchies (Chrislip, 2002). However, there are some shared sub dimensions of core leadership capacity that every organization needs, and which can be developed at every level of the organization. A useful model of core leadership capacity derived from the Ontario Leadership Framework (OLF) is shown in Figure 1.



(Ontario ministry of education, 2010)

Figure 1 The five core leadership capacity (five sub-dimensions)

Briefly, the five core leadership capacity (CLCs) identified by this model can be defined as (Ontario Ministry of Education, 2010):

- Goal setting: Leaders must work with followers in order to collaboratively establish a goal that reflects mutual priorities and preferred outcomes. These goals should require a high, but achievable, level of performance from followers and should include appropriate motivation to achieve them.
- Aligning resources and priorities: The organization has limited resources in order to achieve their aims. They need to set priorities and make the best use of resources to achieve these goals.
- Promoting collaborative learning cultures: The leadership process in an organization must focus on collaboration and organizational learning as well as meeting specific goals. The collaborative learning culture promotes knowledge sharing and positive relationships between leaders.
- Using data: Collecting and using data to make decisions, rather than working on instinct or preference, allows leaders to make decisions that address priorities, make the best use of resources and provide the highest level of support for the organization.
- Engaging in courageous conversation: Courageous conversations are “those we often wish we could avoid, but are essential to moving forward (Ontario Ministry of Education, 2010, p. 15).” Being able to engage in courageous conversation is an essential core leadership capacity, because leaders often must directly address uncomfortable or unpopular topics.

The model of leadership capacity described above is particularly in educational leadership, where the five core capacities are recognized as being relevant to both school leadership and broader educational policy setting (Soehner & Ryan, 2011). They are founded on democratic and cooperative norms of leadership, in which leadership is an activity or process rather than a specific role (Soehner & Ryan, 2011). Thus, even though they are most commonly used in the educational leadership context, there are still useful applications of these five capacities to other forms of organization.

Organization commitment

One outcome this study will explore is organization commitment. The definition of organization commitment has varied widely, especially in earlier periods, with some researchers considering it to be an attitude and others considering it to be a practice (Mowday, Steers, & Porter, 1979). Other authors have termed these streams of research as affective attachment, perceived cost, and obligation models of commitment (Meyer & Allen, 1991). In early years of development of the concept, these variant definitions caused difficulty in measuring and assessing organization commitment in a consistent fashion (Mowday, et al., 1979). However, the emergence of the three-component model of organization commitment has created more consistency in definition and measurement of the construct (Solinger, van Olffen, & Roe, 2008).

Although there are some critiques of this model (discussed below), the three-component model of organization culture will be used for this study.

The three-component model of organization commitment defines commitment as “a psychological state that (a) characterizes the employee’s relationship with the organization, and (b) has implications for the decision to continue or discontinue membership in the organization (Meyer & Allen, 1991, p. 67).” This model is an integrative model, combining several distinct conceptualizations of organization commitment that reflect different attitudes and beliefs of the individual. It resolves the seemingly conflicting definitions by positioning the attitudinal and behavioral aspects of commitment as complementary; in other words, organization commitment is viewed as a mindset, emerging from specific attitudes, beliefs and preferred action (Meyer & Allen, 1991). However, the three components are not viewed as identical, but instead represent different aspects of commitment. The three components of organization commitment under the three-component model are defined in Table 1. The psychological bases of these commitment dimensions can be identified respectively as identification with the organization (including high involvement and congruent values); investment in the organization and perceived lack of alternatives; and socialization and reciprocity, which creates feelings of obligation (Meyer, Becker, & Vandenberghe, 2004).

Table 1 The components of organizational commitment

Component	Definition
Affective commitment	“The employee’s emotional attachment to, identification with and involvement in the organization.” Affective commitment is based on desire.
Continuance commitment	“An awareness of the cost associated with leaving the organization.” Continuance commitment is based on need.
Normative commitment	“A feeling of obligation to continue employment... [a feeling] that they <i>ought</i> to remain with the organization.”

(Source: Meyer & Allen, 1991, p. 67)

Core leadership capacity and organization commitment

There have been limited studies that address the relationship between core leadership capacity and organization commitment. Previous studies identified some potentially interesting relationships between core leadership capacity and organization commitment. For example, one study found a connection between social capital skill development of leaders (focusing on one aspect of core leadership capacity) and organization commitment (McCallum & O'Connell, 2009). Another study found that there was a connection between the use of talent retention practices that emphasize many of the characteristics of core leadership capacity and organization commitment, which is in turn associated with higher levels of talent retention (Kontorghiorghe & Frangou, 2009). These studies join more general studies that emphasize a connection between leadership and practices of the organization and outcomes including organization commitment.

Conceptual framework and action research framework

The conceptual framework’s relationships explored include the role of core leadership capacity in the development of organization commitment. These relationships are suggested, though not proved, by core leadership capacity model itself (Ontario Ministry of Education, 2010) as well as other studies that connect core leadership capacity or skills to organization performance and organization commitment (Amagoh, 2009; Bhatti & Qureshi, 2007; Kontorghiorghe & Frangou, 2009; Lockwood, 2007; McCallum & O'Connell, 2009). These studies provide support for the relationship between core leadership capacity and organization commitment, and do provide some suggestive evidence for the relationship between core leadership capacity and/or skills and the development of follower and organization performance.

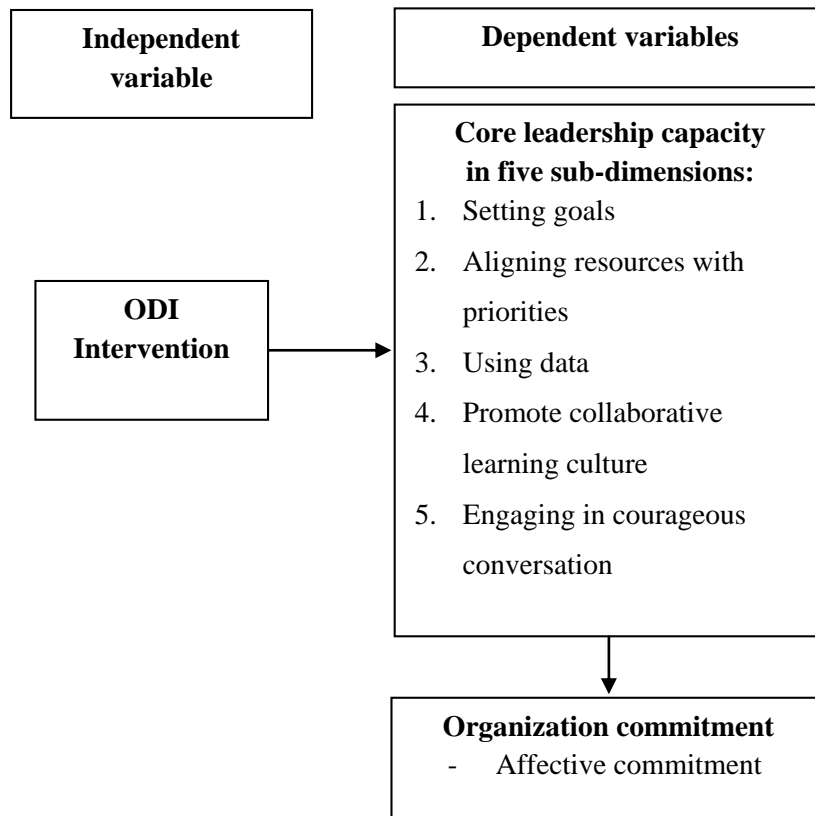


Figure 2 Conceptual framework of the study

Figure 3 shows the action research approach designed for the study. It aims to identify core leadership capacity and develop an understanding of how this can be improved (Bushe, 1999; Cooperrider & Srivastva, 2008; Cummings & Worley,

2009; McLean, 2006). The approach was chosen in order to emphasize the positive aspects of the firm's activities, rather than focusing on negative factors. The goal is to improve core leadership capacity, organization commitment.

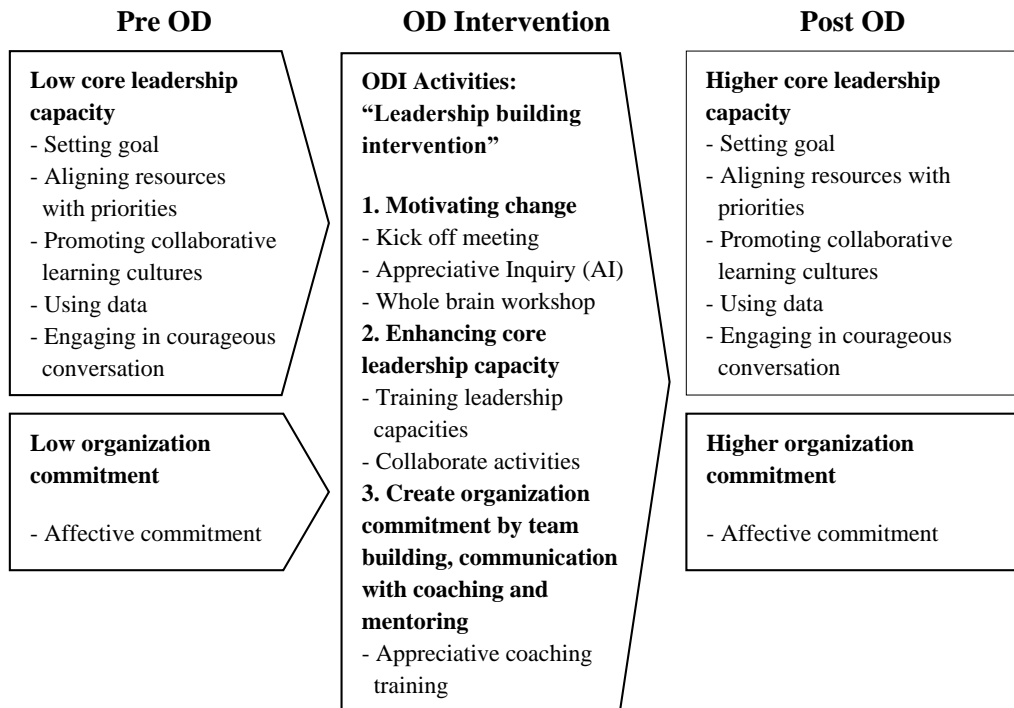


Figure 3 Action research model (ARM)

Research methodology

This research poses several questions regarding the relations and dynamics present between core leadership capacity, organization commitment, and productivity within an organization. Because these relations are complex, they must be subjected to a multidimensional analysis that explores both the qualitative and quantitative aspects of the situation. For this reason, the study used mixed methods for a methodical investigation of AAA Realty Co. Ltd. Since this research is structured as a case study based on a single

company, it will follow the indications of Yin (2003, 2009) for reliability and validity.

In the quantitative phase, the collected data analyzed by SPSS in order to answer the hypothesis and formulated of this study. For this purpose, descriptive and inferential statistics were employed. However, it was not within the purpose the research to confirm causation from leadership to the other two variables, namely productivity and employee commitment or from organization commitment to productivity. All three variables might only be in a correlative relation. In the qualitative phase, the collected data were explored through

content analysis and thematic analysis to establish the recurrent themes in the discourse of the participants in the study (Fereday & Muir-Cochrane, 2006; Vaismoradi, Turunen & Bondas, 2013).

Subjects of study/sources of data

The overall population that was selected as the group of participants in the study were composed of employees (n=40) and management level (n=20), or overall personnel of the company (n=60/ the entire company). All the participants in the study were gone through the ODI at the time when their second round of answers will be collected for comparison with the status before the ODI. Since AAA Realty is a small firm, all the employees were included in the study and will undergo the ODI. The quantitative phase of the research focused on the employees (n = 40), who answered a questionnaire to test their organization commitment. The qualitative phase of the research will focus on interviews with three individuals pertaining to management and five employees. For selecting this sample, the researcher employed a simple random sampling procedure (Teddle & Yu, 2007; Cochran, 2007). In

simple random sampling, the participants are selected.

Design/development of OD interventions

Pre-ODI

During the pre-ODI phase, participant data were collected through interviews and surveys. Both managers and employees were interviewed for the qualitative phase of the research; employees received questionnaires for the quantitative phase. The researcher reviewed company internal data in order to assess organization situation and held a formal meeting (one session of 30 minutes) to inform employees about the process of ODI and what are their roles and involvement in this project.

ODI

The ODI process was divided into three stages, namely workshops on Whole Brain Literacy (WBL) and Appreciative Inquiry (AI), trainings on core leadership capacity, and team building and communication. The names of the activities and their contents were presented in the section above (as they were held for the employees to ensure an informal climate that aids learning), while here they were formalized.

Table 2 ODI Stage and detail

ODI stage	Objective	OD Intervention	Duration
1.Training and Workshop: Whole Brain Literacy (WBL) and Appreciative Inquiry (AI)	1. To introduce the theory and practice of WBL and AI 2. To understand the strengths and weaknesses of individuals and how to apply the WBL and AI in their work life	1. Workshop – WBL and AI Introducing workshop agenda and expected outcome Introducing WBL and AI concept Whole brain evaluation (Brain Map Test) How to apply the WBL and AI by design of “How to achieve company dream plan in 5 years together” and “Dream activities sharing for social together”	1 day 10 th Sept,16
2.Training &workshop: core leadership capacity	1. To understand the concept of leadership capacity 2. To understand the benefits of core leadership capacity 3. To understand the core leadership capacity and how it can be applied in your work and diary life	Training – Core leadership capacity (2 classes) <i>For management</i> - Introducing training agenda and expected outcome - Core leadership capacity and its benefits - Essential core leadership capacity in work life and how to coach/ train your staff <i>For employee</i> - Introducing training agenda and expected outcome - Core leadership capacity and its benefits - Essential core leadership capacity in work life	1 day 10 th Oct,16
3.Workshop: Team building and Communication	1. To encourage team building 2. To learn and understand effective communication	Workshop (2 group) “Dream activities sharing for social together”	2 day 15 th -16 th Oct,16

Post-ODI

The activities from the pre-ODI phase were repeated in their entirety during the post-ODI phase to enable comparison

between the sets of data. Thus, both employees and managers were under semi-structured interviews and quantitative surveys. A secondary document review was enabled the

researcher to determine whether core leadership capacity and organization commitment were increased as a consequence of the ODI.

Data analysis

The data analysis employed the tools and statistical means and procedures. These tools are the following: (1) descriptive and inferential statistics (Pair t-test) for the quantitative data and (2) content analysis and thematic analysis for the qualitative semi-structured interviews.

Result and discussion

This study has reported on the process and outcomes of an organization development (OD) process in one of Thailand's leading real estate companies, AAA Realty. A pre-research evaluation of the company found that the organization was previously a small, familial company, but had been expanding rapidly as Thailand's real estate market diversified and spread geographically. This had led to growing pains in the organization, especially

related to core leadership capacity development, organization commitment. OD was identified as an organizational change process that could help AAA Realty enhance its core leadership capacity development and organization commitment.

In this section, the results of these study were reported respectively. First to examine the relationships of core leadership capacity and organization commitment. The second is to examine the difference between pre-ODI and post-ODI states. Finally, the results will be discussed and compared with the literature review.

Hypotheses 1 were assessed by using the Pearson correlation method, with acceptance at $p < 0.05$. These hypotheses were assessed using the post-ODI measures. Where, Hypothesis 1 (There is no statistical significant relationship between core leadership capacity and organization commitment) the results are summarized in Table 3. This correlated between core leadership capacity and affective commitments was statistical significant value $r = 0.296$, $p = 0.022$. Thus, H1o was rejected.

Table 3 Pearson correlation core leadership capacity and organization commitment for all group n=60 (H1)

Pearson correlation: Core leadership capacity and organization commitment for all group n=60		All core leadership capacity	All organization commitment
Core leadership capacity	Pearson correlation	1	.296
	Sig. (2-tailed)		.022
	N	60	60
Organization commitment	Pearson correlation	.296	1
	Sig. (2-tailed)	.022	
	N	60	60

These second of two set of hypotheses addressed the statistical significantly differences between the pre- and post-ODI of core leadership capacity (H2) and Organization Commitment (H3). These hypotheses were tested using paired samples t-tests, which determine whether individual participants had a change between pre- and post- ODI. Results were assessed at $p < 0.05$. Where hypothesis 2 (There is no statistical significant mean difference between Pre- and Post- ODI in core leadership capacity)

Results are summarized in Table 4. The mean of core leadership capacity rose by 0.27 points. The t-test showed that there

was a statistical significant difference for factors including setting goals ($t = 5.48$, $p = 0.000$), Align resources with priorities ($t = 4.30$, $P = 0.000$), promoting collaborative learning cultures ($t = 3.65$, $p = 0.001$), using data ($t = 3.58$, $p = 0.001$) and engaging in courageous conversation ($t = 3.03$, $p = 0.004$).

Therefore, the result of paired samples t-test in all five dimension of these core leadership capacity, there were positive mean difference, which indicates that the pre-ODI score was lower than the post-ODI score. As the result showed statistically significant in all sub dimensions. Therefore, H_{20} was rejected.

Table 4 Paired samples t-test on core leadership capacity (H2)

Core leadership capacity (Sub dimension)	Pre-ODI		Post-ODI		Mean difference		T	Sig. (2-tailed)
	Mean	S.D	Mean	S.D	Mean	S.D		
Setting goal	4.11	0.50	4.44	0.35	.33	.47	5.48	.000
Align resources with priorities	4.20	0.51	4.48	0.40	.27	.50	4.30	.000
Promoting collaborative learning cultures	4.24	0.40	4.55	0.44	.31	.66	3.65	.001
Using data	4.11	0.50	4.37	0.47	.25	.56	3.58	.001
Engaging in courageous conversation	4.34	0.44	4.55	0.36	.21	.53	3.03	.004
Overall score of core leadership capacity	4.20	0.41	4.48	0.34	.27	.45	4.73	.000

Finally, in table 5 showed test result for H3 (There is no significant difference between Pre ODI and Post ODI on organization commitment), affective commitment increased ($t = 4.99$, $p = 0.000$), in the post-ODI period. Thus, H_{30}

is rejected. The mean affective commitment rose by 0.42 points in the post-ODI period. Under the model of organization commitment, this indicates that employees have stronger commitment in part of emotional

attachment and involvement toward the organization and are less likely to leave (Meyer & Allan, 1991). This study

focuses to consider only in affective commitment which is based on individual desire.

Table 5 Paired samples t-test on organization commitment (H3)

	Pre-ODI		Post-ODI		Mean difference		t	Sig. (2-tailed)
	Mean	S.D	Mean	S.D	Mean	S.D		
Affective commitment	3.93	.53	4.35	.45	0.42	.67	4.99	.000

These outcomes show that the action research framework, in which organizational issues are identified and solutions are found to improve the organization (Bushe, 1999; Cooperrider & Srivastva, 2008; Cummings & Worley, 2009; McLean, 2006), was successful in all areas. Thus, as expected, the OD interventions were an essential method, and effective response to the organization's critical needs.

Conclusion

In conclusion, this OD process was an excellent first step to organizational change at AAA Realty. The OD process and intervening activities made substantive changes in core leadership capacity, organization commitment in the organization, and provided direction for future changes and programs to be implemented to help AAA Realty continue to manage its growing pains successfully. While there are some areas for improvement, these areas for improvement provide support for the organization, because they point to areas where the organization needs to continue to improve. Thus, the OD had positive

outcomes for the employees and managers as well as the full organization. AAA Realty has emerged from the OD process a stronger organization and more able to manage its rapid rate of expansion.

Recommendations

The final task of this research was to critically reflect on the findings and offer recommendations for post-ODI action in AAA Realty and for the academic research. The first set of recommendations is directed toward improving core leadership capacity, including using data, aligning resources and priorities, and engaging in courageous conversations. Which show less improvement when compare with others sub dimensions. These three areas are core leadership capacities according to the Ontario core leadership capacity model (Ontario Ministry of Education, 2010). Thus, these three areas would be an appropriate focus for developing more detailed organizational training and development for employees and staff members. OD processes are intended to implement organizational change, and

although they often include training they do not necessarily focus on the type of technical training required to improve these leadership capacities (Cummings & Worley, 2009; McLean, 2006). As a simple example, it would be difficult to convince managers and employees to use data in decision making if they do not understand how to access and evaluate the required data. Thus, the first recommendation is that formal training programs should be established that address these three areas of core leadership capacity.

The second post-ODI recommendation for AAA Realty is that some of the OD activities and learning should be extended and continued through the existing employee training program. The ODI feedback identified aspects of the training including WBL and AI, along with the core leadership capacity model, as potentially helpful for employees throughout the organization. Furthermore, developing core leadership capacity is not an individual activity (Leithwood, et al., 2006). Instead, to make the most of its resources, AAA Realty needs to develop core leadership capacity throughout the organization, not just for its current managerial staff (Leithwood, et al., 2006). The OD showed that the organization already had a positive approach to collaborative learning, which improved following the ODI sessions. Thus, it makes sense that the organization should use collaborative learning to disseminate knowledge about core leadership capacity throughout the organization. This could be accomplished by incorporating core leadership capacity training, WBL, and AI information in the employee training and development program.

The third recommendation for AAA Realty is directed toward improving communication and teamwork. Horizontal and vertical communication and interdepartmental teamwork were identified early in the OD process as a substantial problem in the organization, which was exacerbated by the rapid rate of growth in the organization. These areas were improved during the OD process, and some initiatives such as the Morning Talk and weekly and annual team activities have already been implemented to improve communication and teamwork. However, there are other steps that could be taken to reduce the isolation of different departments and increase horizontal and vertical relationships in the organization. For example, front-line employees could be represented in senior managerial meetings, and interdepartmental teams could be established to address issues that affect operations of multiple departments (Cheung-Judge & Holbeche, 2015). These activities would improve communication and reduce the sense of isolation in teams, which could improve the overall performance of the organization. However, it would require additional leadership training and organizational resources, which is why it is addressed as the last recommendation for improvement.

Recommendations for future research

The second set of recommendations is for future research. There are two main recommendations, including developing a robust theory of core leadership capacity and empirical research into the effectiveness of WBL. Although core

leadership capacity is often discussed in practice literature, there is no single model of core leadership capacity that has been developed and robustly tested. The model used here, developed by the Ontario Ministry of Education (2010), has been addressed by other researchers (Leithwood, et al., 2006), but has not been used extensively in literature. There are conflicting models of core leadership capacity, for example an individual trait-based model of core leadership capacity that positions the concept as an inborn set of characteristics (Scharmer, 2008). Thus, there are conflicting understandings of core leadership capacity, and these conflicts create ambiguity and complexity in understanding the concept. In particular, there is a conflict as to whether leadership capacity is an individual or organizational resource. In OD, core leadership capacity must be addressed as an organizational resource that can be developed, rather than an inborn individual trait. Thus, the first recommendation is that there should be a more intensive theoretical development study directed to improving the theory of core leadership capacity as an organizational resource. This research could be undertaken using grounded theory or ethnography within

organizations, which could be used to develop the concept and provide a theory for testing. The second recommendation is for more empirical research into the WBL approach and its underlying Brain Map concept. These concepts have developed over time (Lynch, 1987; Tayko & Reyes-Palmo, 2010), and can be considered as promising approaches. The WBL approach is intended as a self-assessment and learning tool for practical use in training and development (Tayko & Reyes-Talmo, 2010), and it has been used in a few previous OD studies, particularly in Asian countries (Vongbunshin, 2011). Furthermore, WBL could be used as a means to improve OD itself (Villavicencio, 2015). Despite this positive reception, WBL is still relatively new and has not been tested empirically very much. It also has a weak underlying cognitive process foundation. Thus, there is more work to be done on WBL, especially demonstrating its empirical basis and effects in the learning process. This research could be undertaken in cognitive and organizational psychology fields, along with OD studies and other organizational training and development studies that examine the utility of the WBL model in organizational activities.

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Exploring Facebook users' willingness to accept f-commerce using the integrated unified theory of acceptance and use of technology 2 (UTAUT2), trust and risk under the moderating role of age and gender

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Abstract

What are the factors that influence consumers' intention to participate in Facebook commerce (f-commerce)? Are the factors the same across all ages and genders? To answer these questions, I i) developed a theoretical framework based on the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model, Trust and Risk, ii) tested the proposed model using Partial Least Squares Structural Equation Modelling, and (iii) interpreted and considered the implications of the results. The results show that consumers' trust in Facebook, performance expectancy, and perceived risk have significant impacts on their purchasing decisions. For young adults (aged 18-24 years old), trust has more influence on behavior intention while performance expectancy has a greater role among working adults (25-32 years old). Although facilitating conditions and habits do not have a significant relationship to behavior intention, their influences vary among females and males. Among females, the influence of facilitating conditions is more significant on behavior intention, while the effect of habits is more influential among males. Nevertheless, the differences among these groups are not significant, thus the findings can be applied to practically any group and e-vendors are not require to create separate programs to accommodate each group.

Keywords: UTAUT2, Perceived risk, Trust, Facebook, f-commerce, s-commerce.

Introduction

Today, social media has transformed into a powerful business tool. It presents businesses an innovative and exciting medium for reaching customers and enriching customer relationships. The most popular social network, Facebook, has 1.79 billion monthly active users world-wide (Statista, 2016) and 37 million users in Thailand (ThaiTech, 2016). Its large number of users are potential consumers for a company to market their products to. Many companies and retailers use Facebook for transaction-based commerce activities. This has given rise to “f-commerce”, a subset of social media commerce which uses Facebook as the platform to facilitate and execute sales transactions (Kang & Johnson, 2015).

Because of its huge potential and popularity, a number of recent studies have examined different issues in f-commerce, such as f-commerce acceptance (Gatautis & Medziausiene, 2014), social factors in f-commerce (Hajli, 2014), service-quality in f-commerce (Wu, Shen & Chang, 2015), FB purchase intention (Ng, 2013), and design features (Huang & Benyoucef, 2013). Despite the recorded studies in f-commerce, currently this area is still a sparsely researched area (Zhang, Lu, Gupta & Zhao, 2014) and continuing study of f-commerce to verify how users' attitudes towards Facebook will influence their intention to adopt f-commerce should be considered a significantly important area of interest.

On top of that, Facebook is not limited to a certain particular user group but, rather, have expanded their reach to a wide variety of user groups. Previous studies

in e-commerce (Grant, 2004, Kwon and Noh, 2010) have focused heavily on the youth segment, because traditionally the online marketplace has been dominated by youngsters. However, a considerable number of recent studies have revealed that as age and gender differs, so do the motivations and uses of social media (Muscanell & Guadagno, 2012). This clearly suggests that age and gender differences do exist in the way today's technologies are utilized and, for that reason, the present study investigated age and gender differences behind the determinants to participate in f-commerce

This study is based on Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) (Venkatesh, Thong & Xu, 2012), a new model which is used to explain individual acceptance of new technology. Given the importance of trust in e-commerce, trust and its' affiliated factor, perceived risk, were incorporated into this model.

In summary, the objective of this study was to address two research questions: (1) Which factor(s) determine the adoption of f-commerce? (2) Do age and gender act as key moderators in this model? The main goal of this study was, therefore, to contribute more understanding of the best ways to understand f-commerce adoption across ages and genders. This study may also provide new insights for e-vendors to formulate strategies that will encourage users to make online purchases and that will develop and enlarge the marketers' customer bases.

Literature review

Facebook commerce (F-commerce)

Social media has radically transformed the methods e-vendors conduct business, providing an entirely new medium in which to interact with consumers. One of the most profound impacts this medium had on e-vendors methods is its capacity to limit barriers to the dissemination of information. The access to information and interactivity provided by social media has created a shift in the balance of power in the e-vendor - consumer relationship. Traditionally, there has been a knowledge gap that has separated e-vendors and consumers. Due to the ease with which social media provides ready access to information, this knowledge gap is narrowing. For consumers, social media has affected aspects of consumers' control. This medium enables consumers to generate information content by presenting their ideas, preferences, and decisions. Furthermore, the content can be distributed to others.

Besides creating realignment in the balance of power between e-vendors and consumers, social media has also acted as a catalyst for the development and implementation of innovative concepts for e-commerce. This new concept is commonly referred to as social commerce (s-commerce) (Huang & Benyoucef, 2013). Liang and Turban (2011) summarized three major attributes of s-commerce: social technologies, community interactions, and commercial activities. Thus, social commerce can be considered a subset of e-commerce that involves using social technologies to assist e-commerce transactions and activities (Yadav, de Valck, Hennig-Thurau, Hoffman, & Spann, 2013). In essence, s-commerce is a combination of commercial and social activities (Liang

& Turban, 2011; Zhou, Zhang, & Zimmermann, 2013).

Facebook commerce (f-commerce) is a type of s-commerce. Hajli, Sims, Zadeh, & Richard (2017) implied that Facebook offers multiple means of Consumer to Consumer (C2C) and Business to Consumer (B2C) connections and enables the co-creation of content in various forms by both e-vendors and customers and, therefore, can enhance the shopping experience (Marsden, 2011).

E-vendors can create a Facebook page as an additional outlet to facilitate promotion and sales opportunities by uploading pictures, videos, news, and promotions, which in turn strengthens the synergetic link between e-vendors and consumers. The consumers can co-create that page by commenting on, rating, reacting to, and sharing pictures, videos, and news on that page (Hajli et al, 2017). Furthermore, the page can be a platform for interaction with the e-vendor and other consumers.

Although Facebook has a huge potential for the creation of economic value, there is still a lack of studies regarding this subject and the results of the limited number of currently available have been disappointing (Yadav et al., 2013). For instance, Facebook's failed attempt to link consumers' browsing behavior on third-party Web sites to the ads they would view on Facebook (Yadav et al., 2013) was an ill-fated advertising platform launched in the fall of 2009 which resulted in a class-action lawsuit charging the company with violating consumers' privacy Vascellaro, 2009, as cited in Yadav et al., 2013) and unsuccessful online "F-commerce" storefronts which have been created by

well-known retailers through Facebook (Yadav et al. 2013). Despite this, some retailers have begun selling products using Facebook pages, probably because it is an inexpensive and easy method to try out social commerce. Using Facebook pages, consumers can share product information, interact with other users, and purchase the products from inside a retailer's Facebook page or Facebook news feed.

Unified theory of acceptance and use of technology 2 (UTAUT2)

Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) was developed through a review of the prior Unified Theory of Acceptance and Use of Technology (UTAUT) model. Even though UTAUT provided a very good, detailed model for the acceptance and use of technology, it has some limitations (Negahban & Chung, 2014). The UTAUT2 model improved the percentage of variance explained in the intention to use ICT by 18%, and in the actual use of ICT by 12% from the previous UTAUT (Venkatesh et al., 2012).

Whereas UTAUT was developed for an organization centered context, UTAUT2 was developed for consumer centered contexts. The UTAUT2 model proposed four constructs from the original UTAUT; namely (i) performance expectancy, (ii) effort expectancy, (iii) social influence, and (iv) facilitating conditions. Three new constructs were also introduced; (i) hedonic motivation, due to its inclusion as a key predictor in much earlier research and its reported

importance (Venkatesh et al., 2003), (ii) price, because in a consumer context users must bear the costs associated with the service use, and (iii) habit, supported by previous studies that showed it to be a critical factor in the technology use context (Kim and Malhotra, 2005; Limayem, Hirt & Cheung, 2007).

While performance expectancy is the most important factor for explaining employees' intention in the UTAUT model, in the UTAUT2 model the construct of hedonic motivation, which is more significant in explaining the intention to use ICT, was added to adapt it to the consumer use context. In addition, three moderators (i.e., age, gender and experience) were found to affect the relationships between the exogenous constructs and consumers' behavioral intention and actual usage (Venkatesh et al., 2012).

Trust and risk

Previous studies (Chiu, Huang, & Hui, 2010; Kim, Xu, & Gupta, 2012) have confirmed the positive link between trust and online purchase behavior intention in the e-commerce setting. Due to uncertainty caused by the high level of user-generated content and the lack of face-to-face interactions, trust is also a critical factor in s-commerce platforms (Featherman & Hajli, 2015).

Despite its importance being widely accepted, there is lack of agreement among scholars on the definition and conceptualization of trust. Hajli et al. (2017) claimed that in the s-commerce context, trust is a significant issue and it plays a particularly critical role in increasing purchase intentions. Social

media, such as Facebook, bridges the gap between consumers and e-vendors as a social commerce platform and provides amenities for the value exchange between parties. Through social media, customers can create and share content (i.e. advertisements, pictures/videos/news, and recommendations) and activities related to the e-vendors. The credibility of the contents and those activities depend on the trust in the social commerce platform.

The absence of face-to-face interactions could also further amplify the undesirable effect of perceived risk in the transaction (Kaiser & Müller-Seitz, 2008, as cited in Hajli et al., 2107). Perceived risk consists of the amount at stake (consequences) and subjective uncertainty of success that a consumer perceives in a situation (Jahankhani, 2009). It is a critical factor that influences whether the consumer will continue their online purchasing (Kim, Ferrin, & Rao, 2008)). The consequences for online purchases include economic, physical, and psychological stakes, etc. The high level of perceived risk associated with an online purchase can discourage an individual from completing an online purchase. In a situation where the consumers continue with the online purchase despite a high level perceived risk, they will engage risk-reducing behaviors to reduce the potential consequences (e.g. comparison shopping, trying a product sample, or purchasing insurance) or uncertainty (e.g. seeking more information from the past experiences of others) (Jahankhani, 2009).

Age and gender differences in technology adoption and its use

Although age, gender, and user experience have been studied as moderators in UTAUT and UTAUT2, recent studies (Khechine, Lakhal, Pascot, & Bytha, 2014; Lian and Yen, 2014) have claimed that age is the most important moderator in technology adoption, rather than gender or user experience. Age, also one of the most important variables in understanding user behavior in computer-mediated communication platforms (Dhir, Chen, & Nieminen, 2016; Haferkamp, Eimler, Papadakis & Kruck, 2012), influences the individual's attitudes toward, perceptions of, and their patterns of technology use (Dir & Torsheim, 2016; Khechine et al., 2014; Lian and Yen, 2014; Magsamen-Conrad, Upadhyaya, Joa & Dowd, 2015).

Previous studies have found that young people primarily view technology as a useful tool for entertainment, especially spending time on social networking sites and downloading songs (Volkom, Stapley, & Malter, 2013), while older people are involved in more serious Internet use, such as emailing, online shopping, and information seeking related to work and health (Jones & Fox, 2009, as cited in Dhir & Torsheim, 2016)

In the context of our study, we studied the differences between young adults and working adults. Young adults are people aged between 18 to 24 years old. Most of them are single, still study in university, or its equivalent, and, if they are already working, do not have a lot of working experience. On the contrary, working adults are people aged between 25 to 32

years, mostly working full time, have a regular income, and a larger disposable income compared to young adults. Majority of working adults are also married, although, they may or may not have small children.

Other than age, gender has also been found to be a critical moderator for understanding user behavior. According to Cyr (2014), there is a need for gender-related research in the context of the internet due to the use of the internet by males and females alike. By recognizing the importance of gender differences, e-vendors could be able to employ marketing strategies optimized to encourage online purchases for each gender. Previous scholars (Huang and Yang, 2010) have claimed that female consumers are more likely to focus on hedonic value, while male consumers are more likely to focus on utilitarian value in the e-commerce context. Furthermore, Davis et al. (2014) suggested that online purchase intention for male shoppers is higher than for females. However, there are still limited studies which have focused on the moderating effect of gender in the online shopping context (Cyr and Head, 2013; Shaoufe, Lü & Li, 2016), particularly in the setting of a developing country.

Research model and hypothesis

UTAUT2

Venkatesh et al. (2012) defined performance expectancy as a consumer's belief about the extent to which information system facilitates the completion of a task. In UTAUT and

UTAUT2, performance expectancy has been found to positively affect consumers' intention to adopt a technology. Purchasing online through Facebook allows consumers' access from anywhere, 24 hours a day, 7 days a week, so it provides great benefit and convenience to consumers making a purchase. Thus, it is expected that individuals who perceived online purchasing through Facebook to have higher performance expectancy would be more intent to adopt that behavior.

H₁: Performance expectancy (PE) is positively related to a user's behavioral intention (BI) to purchase product through Facebook.

Effort expectancy refers to a consumer's perception of effort needed to complete a task using a given IS (Venkatesh et al., 2012). In UTAUT and UTAUT2, the researchers found that effort expectancy positively affects consumers' intention to adopt a technology. For this study, I assumed that when consumers felt that online purchasing through Facebook was easy and did not require much effort, they would be encouraged to adopt this behavior.

H₂: Effort expectancy (EE) is positively related to a user's behavioral intention (BI) to purchase a product through Facebook.

Facilitating conditions refers to consumers' perceptions of the resources and support available to perform a behavior (Venkatesh et al., 2012). It was assumed that if an operational infrastructure existed and supported the online purchasing through Facebook, it would increase the behavioral intention to adopt.

H₃: Facilitating conditions (FC) are positively related to a user's behavioral intention (BI) to purchase a product through Facebook.

Social influence signifies the influence of environmental factors, such as the opinions of a consumer's friends, relatives, and seniors, on behavior (Venkatesh et al., 2012). Therefore, positive opinions were expected to encourage the consumer to adopt online purchase behavior intention through Facebook.

H₄: Social Influence (SI) is positively related to a user's behavioral intention (BI) to purchase product through Facebook.

While the original UTAUT focused on extrinsic motivation (i.e., utilitarian value), UTAUT2 considers both extrinsic motivation and intrinsic motivation (i.e., hedonic motivation). In the UTAUT2 study, hedonic motivation was found to be an important determinant of technology adoption and use. Hedonic motivation represents the consumer's belief about the extent that using an IS is entertaining (Venkatesh et al., 2012). Compared to the other technologies that have been studied using UTAUT and UTAUT2, social media can be considered as an extremely hedonic technology and therefore, purchasing product through Facebook was expected to be enjoyable to users and leads to its adoption.

H₅: Hedonic motivation (HM) is positively related to a user's behavioral intention (BI) to purchase a product through Facebook.

Habit refers to the extent to which consumers' tend to perform automatic behaviors due to learning (Venkatesh et

al., 2012). According to Limayem et al. (2007), habit has a moderate effect on intention since as habit increases, intention to use technology is less important. However, I assumed as a habit became engrained in a behavior, users were less likely to be attracted to the incentives and advantages alternatives offer and, as a result, habit might directly impact an individuals' intention. It is expected that the more the individual used Facebook to purchase products successfully, the more likely that Facebook, rather than other mediums, would be used to purchase the next product. Based on the above, this hypothesis is:

H₆: Habit (HT) is positively related to a user's behavioral intention (BI) to purchase product through Facebook.

Venkatesh et al. (2012) suggested that price value is one of the key determinants of intention. However, this construct would be irrelevant because anybody can use Facebook for free. Therefore, the concept of price value was removed from the core model and trust and risk were substituted.

Trust and risk

In this study, trust refers to the belief that "one can rely upon a promise made by another and that the other, in unforeseen circumstances, will act toward oneself with goodwill and in a benign fashion" (Suh & Han, 2003, p. 137). Past studies (Hajli et al., 2017; Wang, Min & Han, 2016) have suggested trust in a commerce platform was a key indicator of behavior intention. Thus, it is expected that only individuals who perceived

Facebook as a trusted entity would be inclined to purchase products through it.

On the other hand, perceived risk is a commonly recognized deterrent to ecommerce adoption. Perceived risk is defined as “a consumer’s belief about the potential negative outcomes from the online transaction” (Kim et al, 2008, p. 546). We could safely conclude that when the consumers perceived that purchasing products through Facebook was risky, the less likely they would develop that behavior. As given, the following hypotheses were developed.

H₇: A consumer's trust (TR) in Facebook is positively related to the user's behavioral intention (BI) to purchase product through Facebook.

H₈: A consumer's perceived risk (RISK) in Facebook is positively related to the user's behavioral intention (BI) to purchase product through Facebook.

Age and gender as moderators

As previously stated, different age and gender groups have different paradigms

of thinking and behavior. Furthermore, prior studies (Venkatesh et al., 2012, Khechine et al., 2014; Lian & Yen, 2014; Magsamen-Conrad et al., 2015) have confirmed that some aspects of consumer acceptance and use of information technology are heavily influenced by age and gender differences. In reference to my study, I was interested in understanding if my findings in this study were different either between young adults and working adults or between males and females. To confirm such insights, the last two hypotheses of this research were developed to test the categorical moderating effect of age (i.e., young adults vs. working adults) and gender (i.e., females vs. males). Thus, the following hypotheses:

H₉: There is a significant categorical moderating effect by age on the relationship among the model constructs.

H₁₀: There is a significant categorical moderating effect by gender on the relationship among the model constructs.

Based on this information, the conceptual framework for this study is shown in Figure 1.

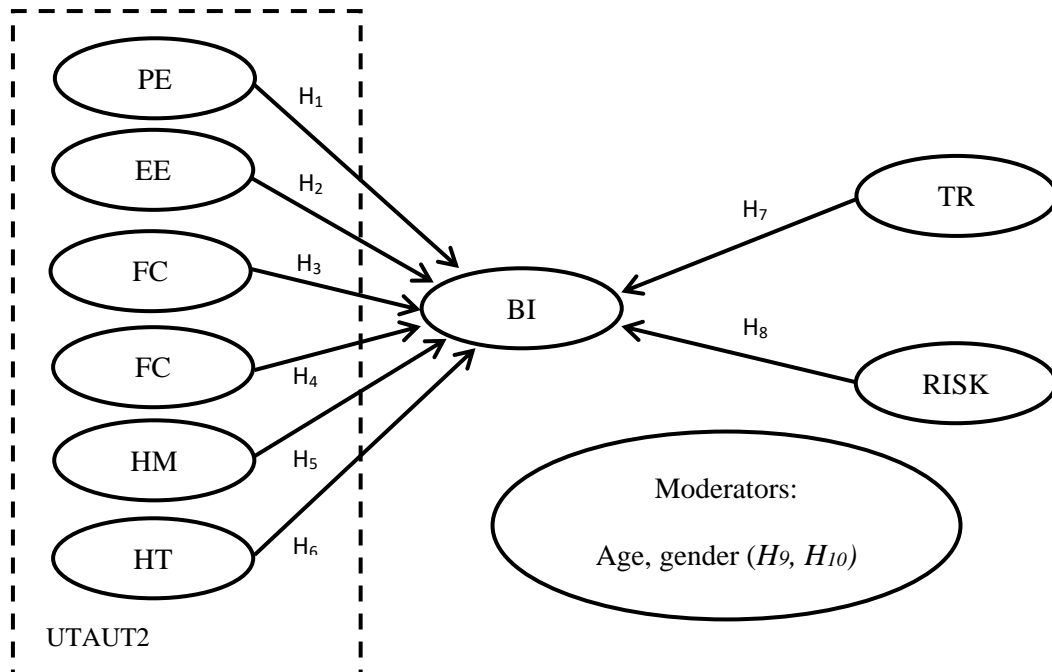


Figure 1 Conceptual framework

Research methodology

Measurement

To test the hypothesized relationships among variables in the proposed research model, a survey was conducted in Thailand. A questionnaire was developed for the survey using the constructs and items from the literature (Appendix A). Measurement items for performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, and behavioral intention were adapted from Venkatesh et al. (2012); items for trust and behavior intention were adapted from Gefen (2000) and Jarvenpaa et al (2000); and items for perceived risk were adapted from Jarvenpaa et al (2000) and

Kohli (1989). Each item was measured on a five-point Likert scale, ranging from 1 (totally disagree) to 5 (totally agree). The questionnaire was created and administrated in English, and reviewed for content validity by language experts from a university. Because the questionnaire was administered in Thailand, the English version of the instrument was translated into Thai language. The questionnaire was then reverse translated into English to confirm translation equivalence.

Sample and procedure

I was able to collect four hundreds and ninety four (494) sets of responses after removing outliers and incomplete



responses. The respondents' ages ranged from 18 to 32. Using G*Power3.1.9.2 software with an effect size of 0.15, a confidence interval of 0.05, and a confidence power of 0.95, minimum sample size is 160. Thus, the sample size is considered appropriate for all groups (all, males, females, young adults and working adults). Sample characteristics are presented in Table 1.

I utilized a network and quota sampling techniques to collect data. Undergraduate students recruited survey participants from their social networks, with survey distribution targeted across a portion of the target population using an online questionnaire created using Google Docs. All participants gave informed consent before completing the survey and the survey took less than 15 minutes.

Table 1 Profile of respondents in this survey

Characteristics	Number (persons)	Percentage
Age		
18-24 years	246	49.8
25-32 years	248	51.2
Gender		
• Male	174	35.22
• Female	320	64.78
Marital status		
• Single	327	66.2
• Married without children	89	18
• Married with children	76	15.4
Educational level		
• High school (M4-M5)	67	13.6
• College/Vocational school or equivalent	82	16.6
• Bachelor degree	300	60.7
• Master degree or higher	40	8.1
Occupation		
• Government officer	62	8.6
• Staff/Management in private company	89	13
• Business owner	112	14.5
• Student	221	62.4
• Others	7	0.9
Personal income (Baht / month)		
• Not more than 10,000 baht	249	54.7
• 10,001-20,000 baht	173	38
• 20,001-30,000 baht	29	6.4
• 30,001-40,000 baht	1	0.2
• More than 40,001 baht	1	0.2
Regions of Thailand		
• Southern Thailand	179	39.3
• Northeastern Thailand	34	7.5
• Central Thailand	47	10.3
• Northern Thailand	195	42.9

Data analysis and results

The model used in this study is a combination of UTAUT2, trust, and risk. According to Hair, Hult, Ringle & Sarstedt (2014), in situations where the objective of the study is prediction of key constructs in an extended theory, rather than a theory confirmation, Partial Least Square Structural Equation Modeling (PLS-SEM) should be used instead of covariance-based SEM (CB-SEM). As stated above, SmartPLS 3.2.6 (Ringle, Wende, Becker, 2015) was used to perform PLS-SEM in this study.

Measurement model assessment

First, the measurement model was assessed for its reliability and validity. Given that reliability is a requirement for validity, indicator reliability of the model was first assessed to confirm whether the associated indicators had much in

common with a particular latent construct. The reliability was assessed with three indices: Factor Loadings, Cronbach's Alpha values, and Composite Reliability, as shown in Table 2. All of the indicators were retained because their outer loadings were higher than 0.7082, meaning the latent variable should be able to explain at least 50% of each indicator's variance. Furthermore, all Cronbach's alpha values exceeded 0.7. In social science domains, it is generally understood that Cronbach's alpha values exceeding 0.7 are good.

The composite reliability for the constructs PE, EE, FC, SI, HM, TR, RISK and BI were shown to be 0.842, 0.873, 0.877, 0.870, 0.875, 0.887, 0.861, 0.874, and 0.879 respectively, indicating high levels of internal consistency reliability (Nunnally & Bernstein, 1994). It was well above the required minimum level of 0.60 that is required to reach a satisfactory composite reliability in exploratory research (Bagozzi and Yi, 1988) but did not exceed the 0.95 level (Hair et al., 2014).

Table 2 Reliability analysis

Construct	Items	Loading	Cronbach's Alpha	CR	AVE
PE	PE1	0.776	0.750	0.842	0.571
	PE2	0.738			
	PE3	0.762			
	PE4	0.747			
EE	EE1	0.835	0.806	0.873	0.632
	EE2	0.746			
	EE3	0.826			
	EE4	0.769			
FC	FC1	0.834	0.791	0.877	0.705
	FC2	0.861			
	FC3	0.823			
SI	SI1	0.819	0.776	0.870	0.690
	SI2	0.836			
	SI3	0.837			
HM	HM1	0.835	0.785	0.875	0.700
	HM2	0.862			
	HM3	0.813			
HT	HT1	0.84	0.809	0.887	0.724
	HT2	0.877			
	HT3	0.834			
TR	TR1	0.81	0.758	0.861	0.674
	TR2	0.848			
	TR3	0.805			
RISK	RISK1	0.858	0.715	0.874	0.777
	RISK2	0.904			
BI	BI1	0.851	0.794	0.879	0.708
	BI2	0.827			
	BI3	0.845			

Validity was assessed using convergent validity and discriminant validity. According to Fornell and Larcker (1981), the Average Variance Extracted (AVE) can be used to assess convergent validity. The AVE for the latent constructs PE, EE, FC, SI, HM, HT, TR, RISK and BI were 0.571, 0.632, 0.705, 0.690, 0.700, 0.724, 0.674, 0.777 and 0.708 respectively, exceeding the threshold level of 0.50 (Bagozzi and Yi, 1988). Thus, the measures of all the reflective constructs could be inferred to have high levels of convergent validity.

The discriminant validity was assessed using Fornell and Larcker's (1981) approach and cross loading examination. Based on Fornell and Larcker's (1981) method, Table 3 clearly shows that discriminant validity is met for this research because the square root of the AVE for PE, EE, FC, HM, HT, TR, RISK and BI were much larger than the corresponding latent variable correlations. Examining the cross loading in the Table 4, we also can see that the indicator's loading to its latent construct is higher than that of other constructs.

Table 3 Discriminant validity assessment

	PE	EE	FC	SI	HM	HT	TR	RISK	BI
PE	0.756								
EE	0.675	0.795							
FC	0.712	0.599	0.839						
SI	0.663	0.563	0.659	0.831					
HM	0.607	0.441	0.631	0.623	0.837				
HT	0.552	0.352	0.654	0.592	0.662	0.851			
TR	0.421	0.452	0.399	0.387	0.348	0.353	0.821		
RISK	-0.247	-0.305	-0.21	-0.324	-0.203	-0.253	-0.334	0.881	
BI	0.46	0.397	0.423	0.415	0.409	0.407	0.667	-0.323	0.841

Table 4 Cross loading

	PE	EE	FC	SI	HM	HT	TR	RISK	BI
PE1	0.776	0.523	0.473	0.516	0.461	0.343	0.304	-0.199	0.333
PE2	0.738	0.524	0.484	0.474	0.393	0.28	0.321	-0.122	0.346
PE3	0.762	0.488	0.59	0.537	0.485	0.516	0.321	-0.179	0.357
PE4	0.747	0.505	0.599	0.477	0.494	0.521	0.327	-0.245	0.352
EE1	0.539	0.835	0.545	0.446	0.378	0.324	0.357	-0.27	0.34
EE2	0.442	0.746	0.456	0.404	0.256	0.28	0.327	-0.214	0.246
EE3	0.565	0.826	0.438	0.387	0.343	0.242	0.346	-0.259	0.341
EE4	0.583	0.769	0.466	0.555	0.407	0.276	0.406	-0.22	0.321
FC1	0.635	0.582	0.834	0.55	0.513	0.503	0.358	-0.217	0.377
FC2	0.572	0.454	0.861	0.523	0.475	0.527	0.33	-0.177	0.347
FC3	0.58	0.463	0.823	0.588	0.603	0.622	0.313	-0.129	0.337
SI1	0.526	0.428	0.533	0.819	0.501	0.474	0.284	-0.261	0.333
SI2	0.544	0.441	0.507	0.836	0.525	0.486	0.339	-0.297	0.367
SI3	0.584	0.538	0.609	0.837	0.525	0.516	0.339	-0.248	0.334
HM1	0.535	0.388	0.611	0.533	0.835	0.583	0.283	-0.128	0.335
HM2	0.56	0.398	0.554	0.563	0.862	0.522	0.283	-0.189	0.346
HM3	0.429	0.321	0.419	0.468	0.813	0.556	0.307	-0.191	0.345
HT1	0.45	0.296	0.599	0.505	0.58	0.84	0.298	-0.172	0.377
HT2	0.453	0.268	0.524	0.492	0.543	0.877	0.278	-0.21	0.322
HT3	0.506	0.332	0.536	0.511	0.562	0.834	0.323	-0.268	0.334
TR1	0.366	0.399	0.367	0.336	0.306	0.3	0.81	-0.213	0.607
TR2	0.306	0.334	0.295	0.274	0.274	0.284	0.848	-0.323	0.497
TR3	0.362	0.377	0.317	0.339	0.276	0.284	0.805	-0.291	0.533
RISK1	-0.211	-0.261	-0.181	-0.271	-0.191	-0.221	-0.258	0.858	-0.265
RISK2	-0.223	-0.276	-0.189	-0.3	-0.169	-0.225	-0.326	0.904	-0.302
BI1	0.419	0.356	0.379	0.384	0.327	0.299	0.574	-0.245	0.851
BI2	0.317	0.308	0.311	0.293	0.321	0.364	0.544	-0.315	0.827
BI3	0.421	0.337	0.375	0.369	0.383	0.365	0.565	-0.258	0.845

Structural model assessment

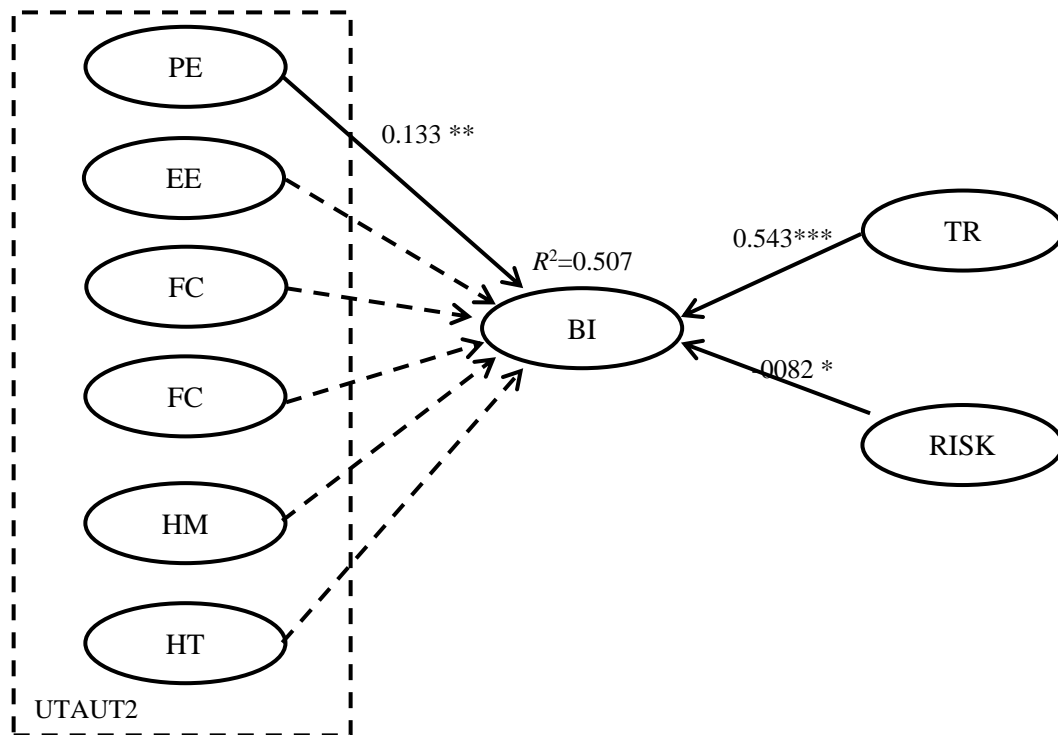
The structural model achieved R^2 value of 0.507 for behavioral intention. Hair et al., (2014) suggested a threshold value of 0.25, 0.5 and 0.7 are used to describe a weak, moderate, and strong coefficient of determination. In this study, the exogenous constructs explain more than 50% of the total variance of the endogenous construct, behavioral intention.

Hypotheses testing

Table 5 and Figure 2 show some of the relationships were significant, confirming our various hypotheses about the construct relationships. The structural model results enable us to conclude that TR has the strongest effect on BI (0.543), followed by PE (0.133) and RISK (-0.082).

Table 5 Significance testing results of the structural model path coefficients

Hypothesis	Path	Path Coefficients	TDEV	t-Value	p-Value	Result	R^2	f^2
H ₁	PE -> BI	0.133	054	2.464	0.007	Supported	0.507	0.012
H ₂	EE -> BI	-0.038	055	0.692	0.245	Not supported		0.001
H ₃	FC -> BI	0.015	060	0.249	0.402	Not supported		0.000
H ₄	SI -> BI	0.015	055	0.280	0.390	Not supported		0.000
H ₅	HM -> BI	0.077	054	1.439	0.075	Not supported		0.005
H ₆	HT -> BI	0.064	053	1.228	0.110	Not supported		0.004
H ₇	TR -> BI	0.543	039	13.947	0.000	Supported		0.426
H ₈	RISK -> BI	-0.082	040	2.055	0.020	Supported		0.011



Note: * $p < .10$; ** $p < .05$ *** $p < .01$ NS=not significant

Figure 2 Structural model analysis

Based on Cohen's (1988) guideline, which suggests that f^2 values of 0.02, 0.15, and 0.35 should be interpreted as small, medium, and large effect sizes, respectively, it can be said that only TR has a large f^2 effect size on BI. The other relationships have a small f^2 effect size on BI.

This study also assessed the effects of the categorical moderator of age and gender using a multi-group analysis (PLS-MGA) based on the parametric approach (Keil et al., 2000). As depicted in Table 6, only two relationships differed

significantly across the two age groups and therefore, the ninth hypothesis (H_9) was rejected. Based on the findings, the effect of TR on BI were higher for young adults while the influence of PE on BI was greater in working adults. As shown in Table 7, H_{10} was also rejected as there are only two relationships differed significantly under the categorical moderator of gender. For female groups, the influence of FC on BI is more significant than in the male groups. On the other hand, the effect of HT on BI is greater in the male groups.

Table 6 Results of multi-group analysis (PLS-MGA) based on age

Hypothesis		Group 1: Young Adults		Group 2: Working adults		Group 1 vs. Group 2			Result	
		p ⁽¹⁾	se(p ⁽¹⁾)	p ⁽²⁾	se(p ⁽²⁾)	p ⁽¹⁾ -p ⁽²⁾	t-Value	Significance Level	p- Value	
H ₉	PE -> BI	0.054	0.094	0.367	0.067	0.313	2.764	*	0.006	Not Supported
	EE -> BI	0.129	0.107	-0.03	0.068	0.098	0.767	NS	0.443	
	FC -> BI	0.004	0.093	0.171	0.081	0.167	1.366	NS	0.173	
	SI -> BI	0.049	0.078	0.036	0.08	0.085	0.767	NS	0.443	
	HM-> BI	0.059	0.074	0.135	0.08	0.076	0.7	NS	0.484	
	HT -> BI	0.101	0.075	0.207	0.079	0.106	0.969	NS	0.333	
	RISK-> BI	0.016	0.055	0.046	0.056	0.062	0.788	NS	0.431	
	TR -> BI	0.589	0.052	0.071	0.07	0.518	5.978	*	0	
n		246		248						

Note: * $p < .10$; ** $p < .05$ *** $p < 0.01$; NS=not significant

Table 7 Results of multi-group analysis (PLS-MGA) based on gender

Hypothesis		Group 1:		Group 2:		Group 1 vs. Group 2			Result	
		Male		Female						
		p ⁽¹⁾	se(p ⁽¹⁾)	p ⁽²⁾	se(p ⁽²⁾)	p ⁽¹⁾ -p ⁽²⁾	t- Value	Significance Level	p- Value	
H ₁₀	PE -> BI	0.208	0.084	0.087	0.07	0.122	1.078	NS	0.28	Not Supported
	EE -> BI	-0.031	0.082	-0.041	0.069	0.01	0.091	NS	0.928	
	FC -> BI	-0.184	0.097	0.13	0.073	0.314	2.581	**	0.01	
	SI -> BI	0.107	0.08	-0.02	0.069	0.127	1.134	NS	0.255	
	HM -> BI	0.042	0.097	0.093	0.062	0.051	0.459	NS	0.649	
	HT -> BI	0.184	0.086	-0.003	0.063	0.187	1.736	*	0.08	
	RISK-> BI	-0.037	0.067	-0.104	0.05	0.067	0.795	NS	0.42	
	TR -> BI	0.527	0.07	0.553	0.048	0.027	0.321	NS	0.747	
n		174		320						

Note: * $p < .10$; ** $p < .05$ *** $p < 0.01$ NS=not significant

Discussion

Key findings

The results of this study offer several interesting insights into consumer behavior on f-commerce.

First, this study did not find that age is significant moderator; therefore, contradicting previous studies (Khechine et al., 2014; Lian & Yen, 2014; Magsamen-Conrad et al., 2015). A possible explanation for this is because the age difference between groups used in this study is quite close, thus, there may not be much of a significant difference to be found. It would be interesting to see whether the result would still be the same if the age difference was wider. Consistent with past studies (Khechine et al., 2014; Lian & Yen, 2014; Magsamen-Conrad et al., 2015), I did not find evidence of gender being a significant moderator. Gender, as used in this study, was based on the reported biological sex like in previous studies, the suggestion by Magsamen-Conrad et al. (2015) to use attributes such as masculine/feminine orientations for classifying genders could be considered for future research.

One particularly notable finding that arose was a very significant relationship between trust in Facebook as a social commerce platform and behavior intention to purchase products through Facebook, which is supported by prior studies (Hajli et al., 2017; Lu et al., 2016). It suggests that respondents' trust in the platform itself could encourage respondents to purchase products through Facebook. There is no significant difference in the influence of trust across genders; however, its influence is more prominent in younger

adults. Therefore, any business that plans to start s-commerce, particularly if targeting younger consumers, should select its social media carefully. If the brand of the chosen social media is famous and trustable, it will encourage consumers to purchase products through it.

Other than trust, the positive influence of performance expectancy on purchase behavior intention through Facebook among the respondents seems to suggest that that utilitarian attributes affect the adoption f-commerce. On the other hand, another psychological factor considered in the extended UTAUT2, hedonic motivation, did not affect the purchase intention. This means that respondents were more focused on the benefits that could help them to improve or complete their tasks, instead of the pleasure seeking benefits. This aspect is more prominent in working adults than young adults and occurred in both genders. It contradicts the previous study by Khechine et al. (2014), but is consistent with the previous study by Jones & Fox (2009) cited in Dhir & Torsheim (2016). The findings also revealed that effort expectancy had no significant effect on the respondents' purchase behavior intention through Facebook. This supports the concept that consumers are ready to learn to use any system, regardless of its complexities, as long as it provides good performance in task completion. Another interesting fact is that since most respondents were between 18-32 years old, most of them were familiar with using computers and Facebook. Familiarity, by its nature, deals with complexity. Consumers who are familiar with Facebook will have a higher tendency to purchase through Facebook (Hajli et al., 2017) and

disregard the effort needed to complete the task.

Even though facilitating conditions did not have significant effects on respondents' behavior intention to purchase products through Facebook, supporting the prior study (Magsamen-Conrad et al, 2015), the construct had a greater influence among females than males. But, contradicting a study by Magsamen-Conrad et al (2015), there is no significant difference among different ages. Our previous suggestion to widen the age gap may be worth exploring.

Another interesting finding is that the presence of social influence did not affect consumer's intention to purchase products through Facebook. This is consistent with Venkatesh et al. (2003). In UTAUT, the researchers found that social influence positively affects consumers' behavioral intention to adopt a technology only in mandatory settings, whereas it did not affect the intention done in voluntary settings (Venkatesh et al, 2003). Therefore we should pay attention to the settings of online purchase behavior intention through Facebook, which is in voluntary, private, and personal settings. As the user's friends, relatives, and superiors, in most cases, cannot see whether the users are actually purchasing the items or not, their opinions will not influence the users' intention to purchase products through Facebook.

This study also provided evidence that perceived risk has significant influence on behavior intention, whereas a consumer's perceived risk reduces the consumers' intention to purchase through Facebook. There is no significant difference regarding the roles of perceived risk on behavior intention in any of the groups, suggesting that all

respondents considered the negative outcome of transaction similarly (i.e., e-vendor will not fulfill its commitment or a loss after payment) before they decided on making an online purchase through Facebook. Actions can be taken by e-vendors to reduce the perceived risk through using a trustable social media with a good reputation or providing consumers with information about consumer rights or money-back guarantees.

Habit was not found to have a significant relationship with behavior intention, contradicting a prior study (Limayem et al., 2007). One possible explanation for this result is that, though users demonstrated habitual behaviors in purchasing product through Facebook, they can easily find some other channels (such as Instagram, Line, official website) with low switching costs and a low learning curve to do online transaction. Although insignificant with behavior intention, the influence of habit on behavior intention is stronger in males than females. Considering the operational definition, and by understanding and inventing ways to promote repetitive usage, companies would be able to attain more profits from this group.

Contributions of this study

From a theoretical perspective, this study contributes to the existing literature by providing evidence on the most influential psychological factors in the user's intention to adopt s-commerce, particularly f-commerce. Supported by an integrative well-known UTAUT2 academic model, this empirical results demonstrate, in line with other previous studies, that the intention to adopt f-

commerce is influenced by trust in social media, the performance expectancy and perceived risk. Additionally, in contrast to prior research on technology acceptance, it is demonstrated that intention is not affected by other constructs (i.e. effort expectancy, social influence, facilitating condition, habit and hedonic motivation) in UTAUT2. Finally, this research makes an important contribution by including age and gender and by demonstrating that these demographic factors do not play significant roles as moderator variables in the formation of f-commerce.

The knowledge of the psychological factors that explain the adoption of f-commerce is useful for e-vendors to redefine their strategies. It is important to highlight the need to inform the prospective consumers about the usefulness and instrumental advantages of purchasing product through Facebook. In this sense, e-vendors need to make an effort to communicate and to create advertising initiative in Facebook which can encourage consumers to purchase products through Facebook and reinforce the efficiency and effectiveness of this transaction channel. This would improve the performance expectancy of users with regard to f-commerce.

Moreover, as trust in social media is the most significant factor that influences the adoption of f-commerce, e-vendors must make an effort to understand and observe which social media that is trusted by their target market. The social media itself, as a s-commerce platform, must appeal to and credible to potential consumers in order to encourage their participation in s-commerce. In addition, their trust on the selected platform is expected to eliminate or reduce their perceived risk in s-commerce transaction.

Heterogeneity testing, using either age or gender, found that gender gap and age gap (particularly between young adults and working adults) are narrowing. Thus, there is no need for e-vendors to use the information on consumers' age or gender to create separate programs to drive customers towards f-commerce. However, online sellers must acknowledge that the degrees of influence of some factors are different among these groups and should be aware of these differences when designing marketing plans.

Limitations and future research

Our respondents were recruited through network sampling via Facebook, thus the sample collected cannot represent the entire Thai population. Therefore, caution needs to be taken when interpreting and generalizing the results.

It would also be worthwhile to include different age groups. For example, older consumers who may be less comfortable with online purchasing due to their lack of familiarity with computers and social media. For these consumers, effort expectancy will be a more significant factor than for younger, more experienced individuals. In the context of gender classification, attributes such as masculine/feminine orientations could be used instead of reported biological sex.

Additional constructs could also be added into the research model for the purpose of improving the prediction of behavior intention to purchase products through Facebook. These other constructs could include user experience with the Internet, social media, and with

online purchasing; user personality traits; and computer self-efficacy.

Finally, since s-commerce is a global phenomenon, it would be interesting to replicate this study in different countries and using other social media platforms, such as Instagram, YouTube etc., for comparative analysis.

Conclusions

The results reported in this study provide a preliminary understanding of consumer behavior in the adoption of f-commerce. I investigated the determinants for purchase behavior intention through Facebook using a framework adopted from the UTAUT2 model, trust, and risk. Regardless of its limitations, the study

offers valuable theoretical and managerial insights. First, it shows the relevance of performance expectancy, trust in the s-commerce platform, and risk on purchase behavior intention. Secondly, it successfully examined the heterogeneity of the results using age and gender as the moderators. Trust in s-commerce platform turned out to have a stronger positive effect on purchase intentions than the other determinants, indicating that e-vendors' first priority should be to pay more attention to their selection of social media because a trustable social media platform itself can influence consumers to participate in f-commerce. In summary, the knowledge of consumers' behavior in f-commerce gained from this study will equip companies with a sustainable competitive advantage.

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Appendix Measurement items for constructs

Construct	Items	Adopted from
Performance Expectancy (PE)	PE1. Using Facebook is very useful in the purchasing process.	Venkatesh et al (2012)
	PE2. Using Facebook helps me to accomplish the purchasing process more quickly.	
	PE3. Using Facebook increases my efficiency in the purchasing process.	
	PE4. Using Facebook improves the performance in the purchasing process	
Effort Expectancy (EE)	EE1. Learning how to use Facebook to purchase products is easy for me.	Venkatesh et al. (2012)
	EE2. My interaction with Facebook to purchase products is clear and understandable.	
	EE3. I find Facebooks easy to use for purchasing products	
	EE4. It is easy for me to become skillful at using Facebook to purchase products.	
Facilitating Condition (FC)	FC1. I have the resources necessary to use Facebook for purchasing products	San Martín, H., & Herrero (2012), Venkatesh et al. (2012)
	FC2. I have the knowledge necessary to use Facebook for purchasing products	
	FC3. I feel comfortable using Facebook for purchasing products	
Social Influence (SI)	SI1. People who are important to me think that I should use Facebook to purchase products.	Venkatesh et al. (2012)
	SI2. People who influence my behavior think that I should use Facebook to purchase products	
	SI3. People whose opinions that I value prefer that I use Facebook to purchase products.	



Hedonic Motivation (HM)	HM1. Using Facebook to purchase products is fun.	Venkatesh et al. (2012)
	HM2. Using Facebook to purchase products is enjoyable.	
	HM3. Using Facebook products is very entertaining.	
Habit (HT)	HT1. The use of Facebook to purchase products has become a habit for me.	Venkatesh et al (2012)
	HT2. I am addicted to using Facebook to purchase products	
	HT3. I must use Facebook to purchase products	
Trust (TR)	TR1. Facebook is trustworthy.	Gefen (2000), Jarvenpaa et al (2000)
	TR2. Facebook gives the impression that it keeps promises and commitments.	
	TR3. I believe that this Facebook has my best interests in mind.	
Perceived risk (RISK)	RISK1. Purchasing from Facebook would involve more product risk (i.e. not working, defective product) when compared with more traditional ways of shopping	Jarvenpaa et al (2000), Kohli (1989)
	RISK2. How would you rate your overall perception of risk from this site?	
Purchase behavior intention through Facebook (BI)	BI1. I am likely to purchase products on Facebook.	Gefen (2000), Jarvenpaa et al (2000)
	BI2. I am likely to recommend Facebook to my friends.	
	BI3. I am likely to make another purchase from Facebook if I need the products that I will buy.	



Relationship between job satisfaction, organizational commitment and demographic factors in private banking sector in Bangkok

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Abstract

This study investigates the relationship between job satisfaction and organizational commitment in Bangkok private banking sector where the employee turnover rate in Thailand was highest in 2012 (12.5%) and 2013 (12.8%) compared to the last four years (Towers Watson Survey; 2014 reports). Study aims to measure the job satisfaction and organizational commitment levels in private banking sector and analyses the various effects of demographics characteristics on these work related attitudes – job satisfaction and organizational commitment. The results from a survey of 401 banking employees revealed that the age, designation (profiles), experience (years of service) has a significant effect on Job satisfaction and Organizational commitment measures and ensures the existence of positive correlation between job satisfaction and organizational commitment in Private banking sector in Bangkok. Moreover, this study also helps foreground individual items that could help banking organizations to strengthened relationship with their work force and also can help in minimizing high employee turnover rate issues in banking industry.

Keywords: Job satisfaction, Organizational commitment, Employee turnover, Banking sector, Organizational behavior



Introduction

Employee retention is an increasingly important challenge for organizations as the age of the knowledge worker unfolds. Employees are a vital resource for nearly all organizations, especially since they represent significant investments in terms of locating, recruiting, training, salaries, healthcare plans, bonuses, etc. Attainment of a high level organizational performance through productivity and efficiency has always been an organizational goal of top priority. In order to achieve this, a highly satisfied work force is an absolutely necessity. Job satisfaction of the personnel and feeling of commitment are two of important factors for organizational productivity and profitability (Semih Eker, 2008: 55)

Job satisfaction and organizational commitment, both were considered as work related attitudes in organizational behavioral theory: one signifies employee feelings about their job; the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs and another shows the degree to which an employee experiences a 'sense of oneness' with their organization (Allen and Meyer; 1991). These attitudes are important to management because they determine the behavior as well of tenures of workers in the organizations and helped them great extent on holding a skilled and motivated workforce, which is essential for the continuing success of organization mission, objectives and goals. Job satisfaction involves employees' affect or emotions; it influences an organization's well-being with regard to job productivity, employee turnover, absenteeism and life

satisfaction (Sempene, Rieger & Roodt 2002; Spector 2008). While generally, in case of low levels of job satisfaction among employees have been shown to produce various undesirable behaviors, such as using organization's time to pursue personal tasks, psychological and practical withdrawal from the job, and behavioral changes that alter the work place environment (ZCamp, 1994). Additional some other negative consequences associated with low levels of job satisfaction include attendance problems, higher rates of turnover, early retirements, lack of active participation in job tasks, and psychological withdrawal from work (ZCamp, 1994). According to Teslla et.al (2007) absence of job satisfaction is the main reason for reduction in organizational commitment and that leads to shift-over to another job. Allen and Meyer (1990) identified a link between organizational commitment and employee turnover, and concluded that employees who were strongly committed to the organization were less likely to leave it.

There are numerous investigations that have studied the relationship between organizational commitment and job satisfaction (Curri van, 1999). Predominant view is that job satisfaction is an antecedent to organizational commitment (Mowday; Porter, & Steers, 1982; Williams & Hazer, 1986; Lincoln & Kalleberg, 1990; Mueller, Boyer, Price, & Iverson, 1994). There is also some support for the reverse causal ordering, organizational commitment as an antecedent to job satisfaction (Vandenberg & Lance, 1992). Findings provided have further evident that job satisfaction is a significant predictor of organizational commitment. Several researchers have made the case that job

satisfaction is a predictor of organizational commitment (Porter, Steers, Mowday, & Boulian, 1974; Price, 1977; Rose, 1991). Andrew Hale Feinstein did a study on the relationships between job satisfaction and organizational commitment of employees at two locations of a national restaurant chain in Southern Nevada. They also worked on revealing homogeneous demographic characteristics these employees exhibit that affect their satisfaction level. Results of their study indicated that satisfaction with compensation; work conditions, policies and advancement have a significant relationship to organizational commitment.

Testa (2001) found that an increase in job satisfaction motivates organizational commitment and thus increase service tenures in the work environment. Although, there was no study found that investigates this relationship particularly in the banking sector areas. However, most findings have proven that increasing job satisfaction and organization commitment helps in employee retentions and overcomes high employee turnover costs. In this paper we mainly focuses on Bangkok private banking sector where the employee turnover rate in Thailand was found highest in 2012 (12.5%) and 2013 (12.8%) compared to the last four years (Towers Watson Survey; 2014 reports). Study aims to measure the job satisfaction and organizational commitment level in private banking and to determine the relationship between them. Furthermore this study also analyses various effects of demographics characteristics on these work related attitudes – job satisfaction and organizational commitment. Study

results revealed that the age, designation (profiles), experience (years of service) has a significant effect on Job satisfaction and Organizational commitment measures and ensures the existence of positive correlation between job satisfaction and organizational commitment in Private banking sector in Bangkok. Moreover, this study also helps foreground individual items that could help banking organizations to strengthened relationship with their work force and also can help in minimizing high employee turnover rate issues in banking industry.

Literature review

Job satisfaction

A key work-related attitude in the workplace is job satisfaction (Greenburg & Baron, 1997, p. 178). Job satisfaction is considered as the most important and frequently studied attitude in the field of organization behavior. It's also looked at, as one of the area that is of high interest to managers and researchers (Nelson & Quick, 1997). It's "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976), p. 304). As job satisfaction is a widely researched and complex phenomenon, it follows that there are numerous definitions in existence to explain the concept. Job Satisfaction can be defined as an individual's total feeling about their job and the attitudes they have towards various aspects or facets of their job (Ivancevich & Matteson 2002; Spector 1997). A person with high job satisfaction appears to hold generally positive attitudes, and one who is

dissatisfied to hold negative attitudes towards their job (Robbins 1993).

Spector (1997) explains that for researchers to understand these attitudes, they need to understand the complex and interrelated facets of job satisfaction. A facet of job satisfaction can be described as any part of a job that produces feelings of satisfaction or dissatisfaction, namely: *pay, promotion, supervision, benefits, contingent rewards, operating procedures, co-workers, nature of the work and communication* (Spector 1997). This perspective can be useful to organizations that wish to identify employee retention areas in which improvement is possible (Saari & Judge 2004; Westlund & Hannon 2008).

Job satisfaction is commonly related as a critical outcome variable in organizations (Judge and watana, 1994) and prior researches has also found that job satisfaction is related to several important outcomes (Eddy et al., 2008) For example; Job satisfaction has been shown related to job performance (Gole and shahu, 2008); to organizational citizenship behavior (gonzalez and garazo, 2006; Ackeldt and Coote, 2005), and to organizational commitment (Allen and Meyer; 1997 ; Lee et al., 2006)

Organizational Commitment

The concept of organizational commitment has attracted considerable interest in an attempt to understand and clarify the intensity and stability of an employee's dedication to the organization (Lumley 2010). Employees play an important role in achieving

organizational targets; therefore, analysis of their psychological characteristics and the impact of these on the organization are crucial. Organizational commitment is vital to preserve and attract well qualified talent pool in any organization. Many organizations are facing major challenges resulting in restructuring, reengineering and downsizing. The need for factors that predict organizational commitment has become more critical. Employees who are committed to their organization may be more willing to participate in 'extra-role' activities, such as being creative or innovative, which frequently guarantee an organization's competitiveness in the market (Katz & Kahn 1978). Organizational commitment is viewed as a psychological connection that individuals have with their organization, characterized by strong identification with the organization and a desire to contribute to the accomplishment of organizational goals (Meyer & Allen 1997).

Organizational commitment can be defined as the extent to which an individual identifies and is involved with his or her organization and/or is unwilling to leave the organization. Meyer and Allen (1991) conceive of organizational commitment as reflecting three core themes namely affective, continuance and normative commitment

Affective commitment: The sense of love and affection for their jobs, feeling of belongingness and attachment to the organization.

Continuance Commitment: The acknowledgement of the consequences of leaving the organization.



Normative Commitment: The ethical responsibility to stay with the organizations

(Meyer & Allen 1991).

Relationship between job satisfaction and organizational commitment

There are numerous investigations found in literature that studied the relationship between job satisfaction and organizational commitment. Predominant view is that job satisfaction is an antecedent to organizational commitment (Lincoln & Kalleberg, 1990; Mowday; Porter, & Steers, 1982; Mueller, Boyer, Price, & Iverson, 1994; Williams & Hazer, 1986). There is also some support for the reverse causal ordering, organizational commitment as an antecedent to job satisfaction (Vandenberg & Lance, 1992). LaLopa (1997) effectively used the Organizational Commitment Questionnaire to evaluate 300 non-supervisory resort employees' levels of commitment. Further, he developed a "Resort Job Satisfaction" scale by adopting items from previous studies. Findings provided have further evident that job satisfaction is a significant predictor of organizational commitment. Strong positive relationships have been observed between job satisfaction and desirable work outcomes such as performance, adaptability and organizational commitment (Curran, 1999). Research results indicates that satisfied employees tends to be committed to an organization, and employees who are satisfied and committed are more likely to attend work, stay with an organizations, arrives

at work on time, perform well and continuously engage in behaviors that are helpful to the organizations (Aamodt 2007). Testa (2001) investigated the relationship between organizational commitment and job satisfaction in regards to work effort in the service environment. Mark Testa found that an increase in job satisfaction motivates organizational commitment and thus increase service in the work environment. Moreover, there was no previous study found in banking sector, and especially in Bangkok.

Demographic effects on job satisfaction and organizational commitment

On basis of gender

Typically job satisfaction is conceptualized as a general attitude toward an object, the job (Okpara, 2006). However, the results of the many studies concerning the relationship between job satisfaction and the sex of the employees have been contradictory (Oshagbemi, 2000). Some common explanation for the different level of work satisfaction sometimes reported for men and women is that women have different expectations with regard to work (Campbell et al., 1976). It was revealed that careers were of central importance to men but not as important to women (Kuhlen, 1963). Lefkowitz (1994) analyzed a number of studies and discovered that women's job satisfaction is in average lower than men's. One explanation for this phenomenon could be that women are less invested in their work, since women's incomes are, or at least used to be, merely the second

income in the household. Another, more likely, reason would be that women experience less job satisfaction because they tend to have less good jobs overall compared to men. While in case of organizational commitment Some studies specifying that the values, where genders regard as more important in working life, have important effects on commitment as well, it was determined that men attach importance to the values like wage, autonomy and responsibility at work, and possessing an effective position in the organization, while women attach importance more to colleagues, communication with people, suitable working hours and job security (Scandure ve Lankau, 1997: 377-391). In Contrary, Al-Ajmi (2006) found that there was no significant relationship between genders and organizational commitment in his study and concluded that men and women have the same level of organizational commitment.

On basis of age

According to (Mckenna 2000 p. 276) job satisfaction tends to increase throughout working life. There are several reasons

accounted, People in their old ages have better jobs than younger ones, since, due to a longer career, they had more chances to obtain a desirable job. 2) People in their old age usually adjusted their expectations downwards over the years and they are therefore more easily content. 3) People in their adulthood generally found more satisfied; 4) Dissatisfied older people are more likely to opt for early retirement, while the remaining older people are satisfied with their job. This actually creates a skewed image of the level of job satisfaction among older people by cancelling out the dissatisfying segment. In addition, Clarke (1996) fig 2.4 below discovered a *U-shaped* correlation between job satisfaction and lifespan. Job satisfaction starts out reasonably high in teenage years, then takes a nosedive in twenties and thirties – with the age of 36 as the lowest point (in average) –, then it rises back up again through the forties and further in the fifties and sixties (Arnold et al 1998 p. 208).

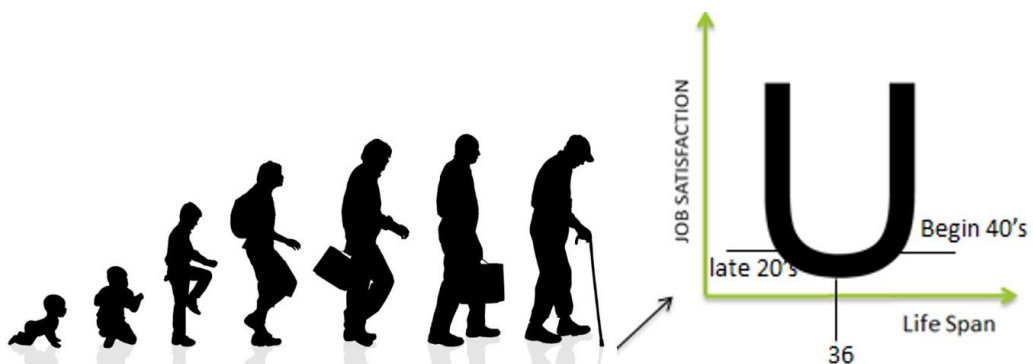


Figure 1

However, Solomon (2005) and Collins and Helen (2013) did not find any significant difference of job satisfaction based on gender and age differences. While in case of organizational commitment, past findings suggests as the person grows older, his/her sense of obligations also gains maturity. Along, the chances for the switchovers also dwindle. Resultantly the individuals in the high age group possess more organizational commitment as compared to fresh entries. Moreover, this phenomenon is also supported by the monetary benefits like pay, pension, funds, allowances (Nawaz & Kundi, 2010)

On basis of profiles, experience and education

Several researchers have focused on the role of relative income in determining satisfaction or happiness. Some labor-market examples are Capelli and Sheer (1988), Pfeiffer and Langton (1993), Clark and Oswald (1996), Law and Wong (1998), Bygren (2004), Ferreri Carbonell (2005), and Browne et al. (2008), using survey data, and Shafir et al., (1997) in experimental work. In general, they concluded that relative wages are important in determining workers' job or pay satisfaction. On the other hand, interaction with others also affects people's own expectations. It has been found that Ahmed et al., (2003);

educational level has significant relationship to the job satisfaction KhMetle (2003): whereas tenure is positively related to job satisfaction by Oshagbemi (2003). Furthermore, these studies showed that workers with more education have a higher job satisfaction level, while other studies indicate that workers with more education have a lower job satisfaction level. Other studies showed there was no relationship between the two.

On the other hand, in case of organizational commitment, the individual's qualification gets better; their sense of belongingness is improved regarding the organizational commitment. The literature also shows that highly qualified employees are considered to be more committed due to their awareness about the organizational attitude with respect to those who are less qualified (Akintayo et al, 2010). As the person grows older, his/her sense of obligations also gains maturity. Along, the chances for the switchovers also dwindle. Resultantly the individuals in the high age group possess more organizational commitment as compared to fresh entries. Moreover, this phenomenon is also supported by the monetary benefits like pay, pension, funds, allowances (Nawaz & Kundi, 2010).

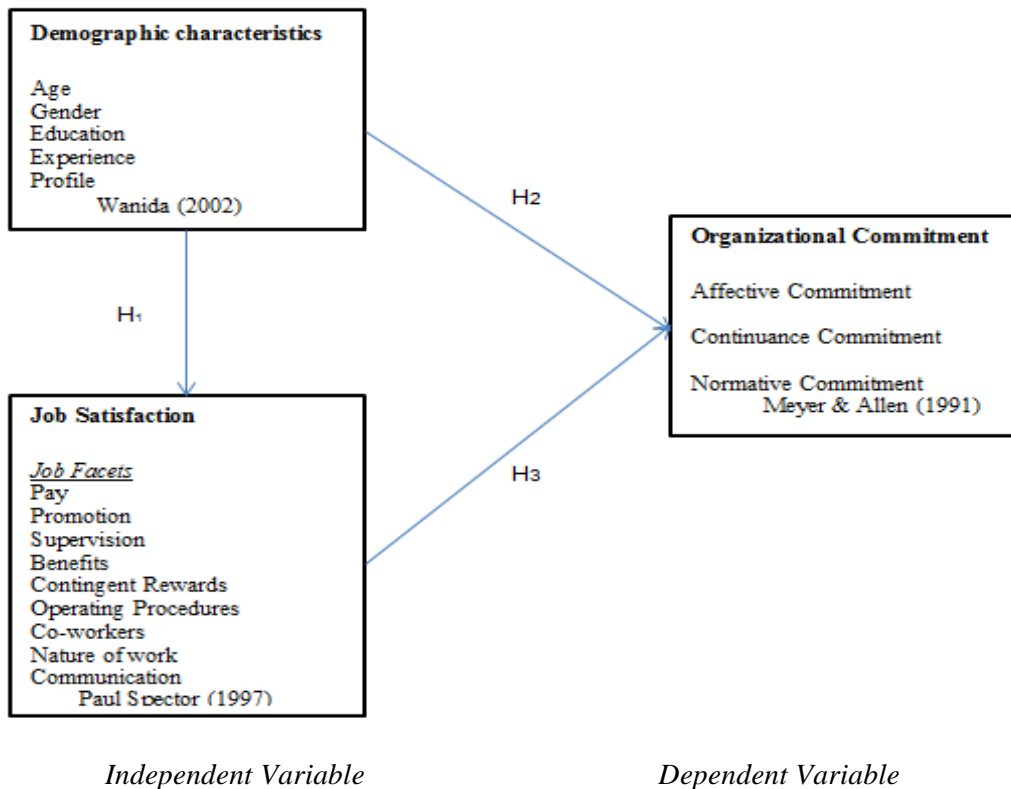


Figure 2 The framework of independent and dependent variable.

To explore the relationship between Job Satisfaction and Organizational commitment and to analyze the different demographics effects on them. We treat the demographics variables and Job satisfaction as independent variables, and organizational commitment as dependent variable. Based on above framework, the three main hypotheses were built as:-

Hypothesis 1: Demographic variables significantly affect bank employee's job satisfaction levels.

Hypothesis 2: Demographic variables significantly affect bank employee's

organizational commitment levels.

Hypothesis 3: Job satisfaction and Organizational commitment are significantly correlated with each other.

Methodology

Sampling Procedures

A field survey was conducted to collect the data. Field studies were considered to be more realistic as they study the phenomenon in their natural setting. Zikd (2003) stated that survey provide quick, inexpensive, efficient and actual

means of accessing information about the population. Primary data was collected by visiting almost 60 bank branches located near Huai Kwang, Petchuburi area, Thailand cultural central, Rama9, Central, Fortune, Sukhumvit and Bank-kapi area in Bangkok. Those areas were selected based on 'ease of transport', 'availability of all targeted banks' and resource availability. Research Surveys in the form of questionnaires were distributed among employees individually or in small group, and also via taking prior initial appointments with respective branch managers from all different local, commercial and retail Thai banks, by collecting data pertaining to employees attitudes related with job satisfaction such as pay, promotion, the work itself/ nature of the work, co-workers relationship, rewards, supervision, operating procedures, fringe Benefits and communication, an employee affective, continuance and normative organizational commitment data towards their organizations, along with demographic data such as age, gender, education levels, profiles and Years of experience of employees. Questionnaires were assumed to take 15- 20 minutes time of each employee. Participation in the study was voluntary and the respondents were assured that their responses would remain confidential. This survey has collected data from October, 2014 – December, 2014.

Participants

There were total 401 participants voluntary took part in this survey. Some 232 of the 401 respondents were women (57.9 %). Most of the respondents were

under or 30 years of age. Maximum respondents were qualified as Bachelor's degree levels, and most of them were working as staff members. Respondent's employee profiles are classified into 3 main types: staff members, senior positions and manager position. Personal bankers, Sales executives, Tellers, Cashiers and other customer service executives etc. were all considered as *Staff members*. Senior employees managing teams working as supervisor, senior supervisors, and assistant managers were considered as *senior level category* and manager of any of the respective work flow in any of the department including the branch managers of all branches were fallen in *Manager position Category levels*. From the demographic information, the respondents cover a variety of ages, profile and experience levels.

Data Measurement

Job satisfaction is measured to identify problems, to understand how turnover occurs, to evaluate change, to improve communication and to assess organized labor issues. Satisfaction can be measured directly which relates to how the worker feels about their job or tasks, or indirectly which asks about the job or task. Ways for measuring job satisfaction can be done through question format. There are various tools most widely that used to measure job satisfaction utilize questionnaires and rating scales. For this study, Job satisfaction was assessed and measured using Paul E. Spector JSS Model, which assessed the overall job satisfaction by using nine facets of job satisfaction, The nine facets are *pay, promotion,*

supervision, fringe benefits, contingent rewards (performance based rewards), operating procedures (reqd. rules and procedures), coworkers, nature of work, and communication. E. Spector JSS model uses 9 facets with 4 item (subscales), with a total of 36 items in 6pt. likert scale. The responses to all 36 items for all respondents are taken on a 1-6 likert scale, where 1 has represented the strongest disagreement and 6 represented the strongest agreement. Scores on each of 9 facet subscales, based on 4 items each, can range from **4 to 24**, while scores for the total job satisfaction will be based on all 36 items and can range from **36 to 216**.

This questionnaire address all nine facets described in the definition above: Pay (E.g: I feel I am being paid a fair amount for the work I do in bank.),

Promotion (E.g: There is really too little chance for promotion in banking sector.), Supervision (E.g: My supervisor in bank is quite competent in doing his/her job), Fringe Benefits and contingent Rewards (E.g: I am not satisfied with the benefits I receive from my bank job.), Operating Procedures (E.g: Many of rules and procedures in banks actually make doing a good job more difficult), Co-workers (E.g ; I like the people in my bank, I work with), Nature of work (E.g: I sometimes feel my bank job is meaningless) and Communication (E.g: Communications seems good within this bank job). Almost any job related factor can influence a person's level of job satisfaction or dissatisfaction. The subscales and the items independently cover 9 out of the 11 standard work factors. (See table1)

Table 1 Job satisfaction survey

Scale	Description
Pay	Pay and remuneration.
Promotion	Promotion opportunities.
Supervision	Immediate supervisor.
Fringe Benefits	Monetary and non-monetary fringe benefits.
Contingent Rewards	Appreciation, recognition and rewards for good work.
Operating Procedures	Operating policies and procedures.
Co-Workers	People you work with
Nature of Work	Job tasks themselves.
Communication	Communication with in the organization.

Note: Adapted from Spector (1997)

Organizational commitment: A number of measures of organizational commitment were found in the literature (Cook and wall, 1980; DeCotiis and Summer, 1987; Hrenniak & Alutto, 1972; Mowday, Porter, & Steers, 1982; Oliver, 1984; Ritzer & Trice, 1969). But the most widely used scales are those of Allen and Meyer (1991) and Porter, Steers, Mowday and Boulian, (1974). Both instruments ask about employee perceptions related to commitment variables. However, Ward and Davis (1995) and Cohen (1996) consider Allen and Meyer's measure of *Three Component model of commitment* is superior because of its ability to capture the multidimensional nature of the commitment construct as well as its high reliability and supportive factor analysis. For this study, the OCS (Organizational commitment survey) developed by Allen and Meyer (1991) was used to evaluate and measure the commitment levels. The Allen and Mayer Commitment Model used three component models classified into Affective commitment which consisted of 8 items, Continuance commitment consisted of 8 items, and Normative commitment which consisted of 7 items questions with a total of 23 items in overall Commitment scale. The responses to all 23 items for all respondents are taken on a 1-6 likert scale, where 1 has represented the strongest disagreement and 6 represented the strongest agreement.

This questionnaire address all three different components of commitment

noted in the definition above: Affective commitment (E.g: I would be very happy to spend the rest of my life with this bank.), Continuance Commitment (E.g: It would be very hard for me to leave my bank job right now even if I wanted to) and Normative Commitment (E.g: If I got another better job elsewhere, I would not feel it was right to leave this bank job.) This study was conducted at the sample data collected from various private bank branches in Bangkok. All necessary demographic information such as age, gender, education level, profiles and years of service had been asked in the beginning of the questionnaires to analyze employee's perception of both job satisfaction and organizational commitment attitudes. The complete details about the questionnaire's development can be found in thesis.

Reliability: Reliability testing ensures the quality of the questionnaire in order to ensure a scale that produces consistent results. In order to obtain more accurate and stable test results, Cronbach alpha coefficients of internal consistency coefficients were widely used. This helps to test the degree of correlation between each item and the establishment of an internal reliability of the questionnaire. This is a commonly accepted rule for describing internal consistency using Cronbach's alpha as followed:

Table 2

Job satisfaction	Cronbach alpha
Pay	.75
Promotion	.69
Supervision	.69
Fringe Benefits	.70
Contingent rewards	.74
Operating Procedures	.80
Coworkers	.78
Nature of Work	.77
Communication	.78
Total	0.79
Organizational commitment	
Affective Commitment	.81
Continuance Commitment	.73
Normative commitment	.81
Total	0.83

Data analyses

This study has utilized statistical techniques such as descriptive and inferential statistics, Pearson correlation to investigate the relationships between the independent and dependent variables. The frequency statistics were used with discrete variables, such as questions of demographic information with proportions or percentages. The regression analysis is a statistical method to deal with the formulation of a mathematical model depicting a relationship amongst variables which are used for the purpose of prediction of the values of dependent variables, gives the

values of the independent variable. so, ‘Analysis of variance’ statistical tests approaches were used in order to analyze hypotheses H1 and H2. A Pearson correlation was performed to test the relationship between our two main variables: Job satisfaction and Organizational Commitment.

Results

The focal sample of this study consisted of total number of 401 bank employees from all local and Thai commercial bank’s’ from almost 60 bank branches located near HuaiKwang, Petchuburi area, Thailand cultural central, Rama9, Central, Fortune, Sukhumvit and Bank-

kapi area. Some 232 of the 401 respondents were women (57.9 %). Most of the respondents were under or 30 years of age. Maximum respondents were qualified as Bachelor's degree levels, and most of them were working as staff members. Respondent's employee profiles were classified into 3 main types: staff members, senior positions and manager position. Personal bankers, Sales executives, Tellers, Cashiers and other customer service executives etc. were all considered as Staff members. Senior employees managing teams working as supervisor, senior supervisors, and assistant managers were considered in senior level category and manager of any of the respective work flow in any of the department including the branch managers of all branches were fallen in Manager position Category levels. These data were refined through descriptive statistics. The mean overall scores of bank employees' job satisfaction and organizational commitment level were measured as 3.36 and 3.31, respectively, out of possible 6.00. Complete evaluation of means for all 9 facets of Job satisfaction and three different components of commitment can be found in "Er.Suri and Petchsawang (2015)". Further, analysis of variance tests were executed to analyze the effects of various demographic factors on employees both job satisfaction and organization commitment levels.

Hypothesis 1 & 2: Demographic variables significantly affect bank employee's job satisfaction and organizational commitment levels.

On basis of age

Employee's ages 30 years and lower were scored the smallest job satisfaction

mean score 3.51 (SD = 0.29) , whereas employees ages 50 years and higher , scored the highest job satisfaction score 4.07 (SD =0.26). Similar, trend were seen in an employee commitment levels where the smallest and highest mean scored as 3.20 (SD = 0.51) and 3.62 (SD = 0.12) for employee ages "30 years and lower" and "50years and higher" respectively. Further, analysis of variances revealed the numerically statistically significant differences in different employee age groups with $F(3,397) = 54.425$, $p = 0.00$ ($p < 0.05$), in case of job satisfaction and $F(3,397) = 7.538$, $p = 0.00$ ($p < 0.05$) in case of an employee organizational commitment levels. Turkey post hoc tests shows that bank employees Job satisfaction and organizational commitment levels tended to increase as a function Age groups. Findings supports the research findings produced by McKenna (2000) that Job satisfaction tends to increase throughout working life and people in their adulthood generally found more satisfied.

On basis of gender

There was no significant difference seen between males and Females levels of job satisfaction, and organizational commitment in private banking sector in Bangkok.

On basis of education, experience and profiles

Education has no significant effect seen on both job satisfaction and organizational commitment levels. However, out of total 401 total respondent's 97.3% (390) bank employees were seen qualified as bachelor's levels. It was also found that the minimum qualification requirement

to hire in banking industry is bachelors, and most of the senior executives and managers were seen limited to bachelor's degree level which shows that employees once joined as staff members, further moved higher level in hierarchies with the same qualification level and received profiles based on their experience levels. On basis of data analysis, researcher did not have enough evidence to conclude results based on education, while on basis of profiles it's been observed that job satisfaction and organizational commitment level rises as the employees moved higher in hierarchy and gained experience. Managers and senior executives were seen more satisfied about their jobs as compared to staff members. Data results also revealed that experience and profiles has significant effect on employee's organizational commitment levels. Organizational Commitment level raises as the employee progressed in their roles from staff members to senior positions, gained more experience and spend more tenure in the organizations. However, it needs to be stated that job satisfaction is an employee's current evaluation of his/her job, and Organizational commitment for an individual is to accept the goals and values of an organization and it can be fluctuate widely depending on environmental factors and Job tasks experienced on a daily basis. Mostly our findings support the conclusions made by Oshagbemi (2003) where tenure and Years of experience was found positively related to job satisfaction and organization commitment levels.

An overall result provides insight about the feelings of banking sector employees about their jobs and helped evaluating the current job satisfaction and

organizational commitment levels. Study also highlighted the areas of improvement to further strengthen relationship between organizations with their work force by enhancing job satisfaction and organizational commitment levels of employees. Study further extended to show how different demographic factors affect the levels of job satisfaction and organizational commitment levels among employees.

Hypothesis 3: Job satisfaction and Organizational commitment are significantly correlated with each other.

The data obtained from the questionnaires' includes measures for both work related attitudes job satisfaction and organizational commitment levels. To analyze the relationship between job satisfaction and commitment levels among the banking sector employees in Bangkok. Pearson product moment correlation tests were performed. Correlation matrices for the entire sample (n=401) are presented in Table below by means Pearson product moment correlation method for all 9 measures of job satisfaction (pay, promotion, supervision, benefits, contingent rewards, operating procedures, co-workers, nature of the work and communication (Spector 1997), overall job satisfaction, three commitment types and overall organizational commitment as the whole measure. According to Cohen (1989), r ranging from 0.10 to 0.29 regarded as indicating a low degree of correlation, r 0.30 to 0.49 regarded as indicating a moderate degree of correlation and r ranging from 0.50 to 1.00 regarded as a high degree of correlation.

Results shows positive and numerically

statistically significant relationship between job satisfaction and organizational commitment ($r = .34$, $p < .01$). Results also shown a positive and statistical significant relationship between Job satisfaction and two dimensions of organizational commitment: Affective commitment ($r = 0.35$, $p < .01$) and Normative Commitment ($r = 0.30$, $p < .01$). Several of the job satisfaction measures underlying dimensions are also positively correlated with dimensions of organizational commitment. Pay was correlated with overall organizational commitment ($r = 0.19$, $p < .01$) and also with its two dimensions affective commitment and normative commitment with r values of '0.18' and '0.15' resp., with $p < .01$. Promotion was correlated with overall organizational commitment ($r = 0.29$, $p < .01$) and also with affective

commitment and normative commitment ($r = 0.29$, $p < .01$). Fringe benefit was correlated with overall organizational commitment ($r = 0.21$, $p < .01$) and also with its two dimensions affective commitment and normative commitment with r values of '0.23' and '0.20' resp., $p < .01$. Contingent Reward was correlated with overall organizational commitment ($r = 0.22$, $p < .01$) and also with all its three dimensions affective commitment ($r = 0.21$, $p < .01$), Continuance commitment ($r = 0.14$, $p < .05$) and normative commitment ($r = 0.25$, $p < .01$). Co-worker was correlated with overall organizational commitment ($r = 0.11$, $p < .05$) and also with its two dimensions affective commitment and normative commitment with r values of '0.09' and '0.13' respectively with $p < .05$.

Table 3 Means, standard deviations, and correlation matrix of sample group ($n = 401$): Pearson coefficient correlation measures

Variables	M	SD	1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3
1 Job satisfaction	3.66	0.35	1	0.56**	0.56**	0.43**	0.57**	0.54**	0.22**	0.41**	0.43**	0.39**	0.34**	0.35**	-0.05	0.30**
1.1 Pay	2.96	0.74		1.00	0.31**	0.16**	0.51**	0.22**	0.02	0.07	0.09	0.06	0.19**	0.18**	0.01	0.15**
1.2 Promotion	3.17	0.75			1.00	0.33**	0.26**	0.22**	0.11*	0.16**	0.16*	0.12*	0.29**	0.29**	0.03	0.08
1.3 Supervision	4.47	0.73				1.00	0.07	0.10*	0.09	0.18**	0.03	0.08	0.02	0.08	0.07	0.01
1.4 Fringe Benefits	3.12	0.73					1.00	0.33**	0.02	0.09	0.11*	0.06	0.21**	0.23**	0.00	0.20**
1.5 Contingent Reward	3.44	0.82						1.00	-0.07	0.19**	0.16**	0.09	0.22**	0.21**	0.14*	0.25**
1.6 Operating Condition	3.51	0.88							1.00	0.03	0.02	0.06	0.01	0.00	0.09	0.03
1.7 Coworker	4.38	0.66								1.00	0.08	0.07	0.11*	0.09*	0.04	0.13**
1.8 Nature of Work	3.67	0.85									1.00	0.07	0.10	0.08	0.04	0.12*
1.9 Communication	4.23	0.80										1.00	0.01	0.02	0.09	-0.01
2. Organizational Commitment	3.31	0.67											1.00	0.89**	0.05	0.81**
2.1 Affective commitment	3.15	0.67												1.00	0.03	0.80**
2.2 Continuance Commitment	3.84	0.64													1.00	0.06
2.3 Normative Commitment	3.07	0.64														1.00

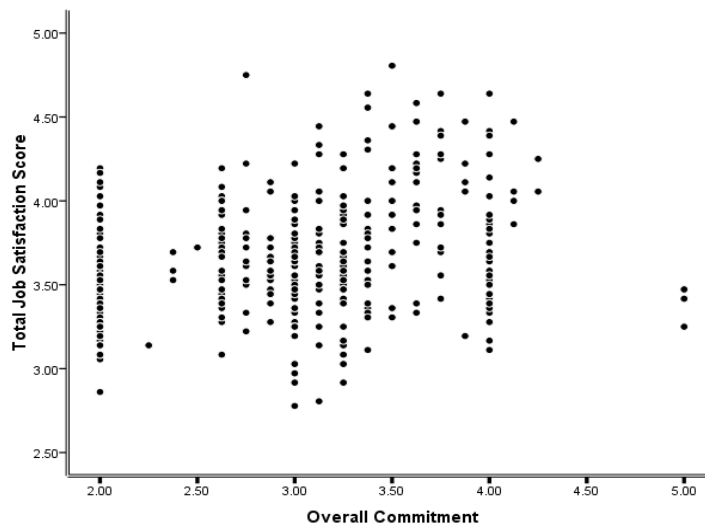


Figure 3 A scatter diagram plotted b/w bank employee's overall job satisfaction and organizational commitments levels

Discussion

The study has contributed to the understanding of banking employees work related attitudes by taking the opportunity of working with bank managers from various branches to expand the current knowledge on banking employee's job satisfaction and an organizational commitment measures. The results of the present research support the contention that job satisfaction helps link an individual to an organization through organizational commitment. The study has revealed that demographic characteristics play an important role in evaluating job satisfaction and organizational commitment. Employees of different ages, profiles and experiences bring different perspectives to the workplace, and are also likely to need different types of support so that they can make their best contributions at work. Also this work related attitudes hold a significant

positive relationship between them in Thai banking sector. Some of the results supported the previous research done on job satisfaction and organizational commitment in other service sectors, but some aspects did not seem to apply on Thai banking sector.

Finally , research findings has also examined the current levels of job satisfaction and organizational commitment in banking sector and also highlighted the weak areas that needs an immediate attention which could really help to overcome the problem of high employment turnover. Therefore, Thai bank organizations would need to focus on how to foster job satisfaction and commitment measures to reduce high employee turnover intentions in banking sector. The findings of this study provide insights into banking employees work attitudes, so this information can be useful to bank organizations, personnel researchers, organizational behavioral



scientists, and management practitioners. Although this study begins to inform the work related attitudes and their relationship for Thai bank workers in Bangkok, but they may not generalize to other locations, requiring additional research in other settings.

Implications for business

Building knowledge based on what causes an employee to feel satisfied, committed and loyal during their work tenures can result in wellbeing of both organizations and workforce. If organizations somehow managed to increase employee job satisfaction it is not only going to benefit them, but it will also benefit the business/organization as a whole. Many studies have shown how management strategies can help to increasing employee job satisfaction lead to a more productive workforce and a more success business overall. This study has helped determining the job satisfaction and organizational commitment level among banking sector employees in Bangkok. Study also highlighted the individual items that need an immediate attention such as pay, promotion, benefits and rewards systems in banking sector which has been found main reason to cause disappointments among employees.

The results could be evidence and one of the main reasons for high employee turnover rate in banking sector. Study revealed that employees were not found strongly committed towards their jobs, rather have shown continuance commitment which states that an employee may commit to the organization because he/she perceived a high cost of losing organizational

membership. This includes things like economic costs such as pension accruals, social costs such as friendship ties with coworkers would be costs of losing organization membership. But an individual does not see the positive costs as enough to stay with an organization. Allen and Meyer (1991) identified a strong link between organizational commitment and employee turnover, and concluded that employees who were strongly committed to the organization were less likely to leave it. So, one of the major implications from this research are that managers/seniors in an organizations could step ahead and foster job satisfaction and commitment within their organization to reduce employee turnover intentions. In addition, employees who are committed to their organization may be more willing to participate in 'extra-role' activities, such as being creative or innovative, which frequently guarantee an organization's competitiveness in the market (Katz & Kahn 1978).

Research recommendation

The present research findings shown that employees understood that the value of benefits they received in banking industry were not competitive enough with similar organizations. Employees did not feel fully participated in reward development and initiatives. Findings suggest that top management needs to intervene and look into the aspect of employee benefit and employee involvement in the reward system. To enhance the job satisfaction level of the employees, the organizations should concentrate mainly on the incentive and reward structure rather than only supervision, nature of work and



communication. The organization also should have essential communication strategy on progress report of rewards policies either by coming up with a new policies and handover employees a written handbooks of newly build reward policies focusing on both monetary and non-monetary satisfaction, both are considered as important in job satisfaction. Better rewarding system should be in place and the policies to be formulated and implemented.

Further, a feedback sessions or surveys inside an organization can helps to reveal the feelings of an employees about new policies and this would also help an organizations to see how its helping employees in terms of new implemented reward structure and on employee satisfactions and commitment scale. Management should pay their attention on providing satisfying salary for employee contribution. More emphasis should be given to opportunities for promotion and develop their skills and abilities of non-managerial level employees. Top management should formulate device and implement, compensation and reward strategy in order to enhance the attainment of overall organizational goals and its performance with a view of getting the best contributive and supportive effects from employees through higher employee job satisfaction.

Employees are the crucial part of the organizations and based on research findings that job satisfaction is greatly affected by the current pay and reward system. Management should ensure that new reward system is effective enough and competitive to influence employees to work harder. Researcher also recommends a higher educational

program (Masters and Above Masters) that needs to be implemented for deserving employees in banking sector. Education always helps people to think broad, helps in decision making and generally assumed to build a right perspective in an individual to perceive things. It can be seen that people on the senior and higher managerial level in banking sector were just limited to bachelors qualification. Management or Top hierarchy in banking sectors could implement a reward structure in terms of higher studies, and sponsorship programs for deserving candidates based on bonds. This way employee's would have an opportunity to continue higher studies along with the work , which finally will contribute to organizational goals and success in terms of highly qualified workforce and better decision making inside the organization . Also sponsored employees will be committed to provide long tenures and helps in overcome turnover rate and encourage employee retentions.

Limitation

Although this research attempted to examine the relationship between job satisfaction and organizational commitment, the study was conducted in only few crowded areas and private bank branches in Bangkok. So the samples were not enough to conclude satisfaction, commitment levels and other findings for whole banking sector. Moreover, the data has been collected only from banking sectors and focus strictly on private, local and commercial banks, so the results may not be generalize to other locations and industries.



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Research on relations among corporate cultural strength, employee behavior and organizational performance empirical analysis from Chinese private education and training industry

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Abstract

It has always been a hot topic in the academic circles about how corporate cultural strength influences organizational performance. This paper adopted questionnaire in empirical research to study the relationship among corporate cultural strength, employee behavior and organizational performance. The questionnaire data was processed with descriptive statistical analysis, reliability analysis, correlation analysis and structural equation model analysis with statistical analysis tools SPSS22.0 and AMOS20.0. Through research, it is found that for Chinese private education and training industry, corporate cultural strength is of positive correlation with organizational performance, and corporate cultural strength is of positive correlation with employee behavior, and employee behavior is of positive correlation with organizational performance, while employee behavior plays an intermediary role in the relationship between the corporate cultural strength and organizational performance.

Keywords: Corporate cultural strength, Employee behavior,
Organizational performance, Empirical research



Introduction

By now, scholars have been working on corporate culture for 40 years and there are numerous theories and textbooks on corporate culture. However, most references mainly focus on the constitutional elements and construction of corporate culture; in the meantime, insufficient attention has been paid to corporate cultural strength. Based on the research status in China, the research on corporate cultural strength started from the 1990s and scholars mainly conducted the studies related to the following aspects. Chunfeng Jia (1998) thought that cultural strength is the guiding force, cohesive force, driving force and inspiring force. Hao Yang and Lianke Song (2013) emphasized the importance of corporate cultural strength and proved the mechanism study of corporate cultural strength from the perspective of strategic human resource management. Yaoqiang Xu and Jin Li (2015) defined the connotation and concept of corporate cultural strength and discussed about the structural mode and measurement method of corporate cultural strength. All the conclusions of the above research were made based on the practical experience, practice or theoretical deduction to a certain extent of the authors and were descriptive analysis. And a few papers conducted an empirical study on corporate cultural strength. At

present, the research on corporate cultural strength of the domestic scholars is still at the initial stage and constitutional elements of corporate cultural strength as well as its causes and conferences need deeper study and empirical inspection. Thus, what is corporate cultural strength? How corporate cultural strength influence organizational performance?

This paper mainly studies the relations among corporate cultural strength, employee behavior and organizational performance. In the background of Chinese circumstance, according to the characteristics of oriental culture, the author has developed the four dimensions of corporate cultural strength, which are spiritual cultural strength, institutional cultural strength, behavior cultural strength and creative learning strength respectively. They also contain 19 questions of corporate cultural strength measurement scale, covering corporate spirit, corporate value, corporate ethics, corporate social responsibility, corporate cohesive force, corporate salary system, corporate incentive mechanism, corporate management standard and operation procedures, corporate information management and communication, corporate democracy, corporate operation practical experience, corporate law abidance operation, corporate activities, employee knowledge and



skills, employee behavioral norms, creative thinking, innovation ability, relearning awareness and learning ability.

The innovations of this paper mainly include the following two aspects: First, the innovation of research perspective. This paper builds the relation model of corporate cultural strength, employee behavior and organizational performance to explore the influence path and mechanism of corporate cultural strength on organizational performance and dynamically demonstrate the role of corporate cultural strength in operation and management. Second, the innovation of theories and methods. Based on the theoretical basis of contract theory and organizational behavior theories, this paper expands the study on relations among corporate cultural strength, employee behavior and organizational performance and reveals the action mechanism of corporate cultural strength to intensify the predictability of corporate cultural strength on organizational performance by building relevant theoretical models. On methods, this paper adopts the empirical research method to verify the relations among corporate cultural strength, employee behavior and organizational performance to guide the corporate cultural strength in management practice and provide more precise and maneuverable theoretical instructions.

Literature review and hypothesis proposal

Corporate cultural strength and organizational performance

Qingkai Nie and Qing Zhao (2008) pointed out that corporate cultural strength is the "core" embedded in the corporate organization, technology and management and is indispensable to corporate performance. Corporate cultural strength could improve production efficiency, decrease transaction cost, improve brand value and increase product value so as to intensify corporate competitiveness. Corporate cultural strength could bring visible and invisible, economic and social benefits to the enterprise, which proves that corporate cultural strength is an effective means to acquire economic growth (Qingkai Nie, Haoming He, 2012). Chunhua Chen (2016) thought that corporate culture is the internal driving force for the sustainable development of the enterprise and is of extreme significance for the enterprise to acquire great performance. Excellent corporate culture could smoothen the internal value difference of the organization, improve the organizational operation efficiency and intensify organizational commitment and team morale. Corporate cultural strength is of



strong path dependence on the development of the enterprise (Qingkai Nie, Qing Zhao, 2008). According to the above contents, corporate cultural strength contains four dimensions which are spiritual cultural strength, institutional cultural strength, behavior cultural strength and creative learning strength respectively.

Spiritual cultural strength and organizational performance

Corporate spiritual culture leads all the members of the enterprise to work and fight together and improves the cohesion and competitiveness of the enterprise as a whole. It is the soul of the core competence of the enterprise (Guangyou Liu, 2002). It can guide, restrict and control the behaviors of the enterprise and employees to build enterprise image and reputation outwards and develop enterprise cohesion and centripetal force of the enterprise inwards through ideas and values. Although spiritual cultural strength is demonstrated in ideas, it contains huge potential, which can greatly improve the core competence of the enterprise as well as destroy an enterprise completely. Therefore, spiritual cultural strength is one of the key factors to decide the rise or fall of an enterprise.

Hao Yang and Lianke Song (2013) pointed out that corporate spiritual cultural strength is the value core of the

constitution of corporate cultural strength and the integration of belief, thinking and perception as well as the ultimate root of corporate values and behaviors. Spiritual cultural strength is also the productivity which reflects the most essential feature of core competence. It is the dominant consciousness of enterprise operation which can not only dynamically reflect the essential features closely related to the enterprise production and operation but also clearly demonstrate the business purposes and development direction of the enterprise. Therefore, it plays a decisive role in the development of an enterprise. Therefore, we put forward research on relations between corporate spiritual cultural strength and organizational performance.

Institutional cultural strength and organizational performance

Wenchen Wang (1998) thought that corporate institutional culture is generated and developed in the long-term production, operation and management practice of the enterprise. It is a cultural phenomenon with the purpose of improving enterprise economic benefit and the carrier of enterprise rules and regulations as well as the embodiment of corporate spirit in enterprise institution. Junzuo Li (2009) pointed out that the incentive functions of corporate institutional cultural strength include regulating and restricting employee behaviors, regulating and coordinating



enterprise production and operation order, mobilizing employees' production enthusiasm and promoting the achievement and realization of the joint vision of the enterprise and its employees. Its corresponding corporate institutional cultural strength is the driving force for the development of the enterprise brought by the management atmosphere which is constituted by the guaranteeing, promoting and guiding systems and mechanisms through the realization of values advocated by the enterprise (Hao Yang, Lianke Song, 2013). Therefore, we put forward research on relations between corporate institutional cultural strength and organizational performance.

Behavior cultural strength and organizational performance

Hao Yang and Lianke Song (2013) also pointed out that corporate behavior cultural strength is the driving force for the enterprise operation brought by culture of enterprise employees in production and operation, learning and recreation activities which could intuitively reflect the connotation of corporate cultural strength. Behavioral culture contains the cultural phenomena in enterprise operation, educational propaganda, interpersonal relationship activities and recreational activities. They are the spiritual strength demonstrated in the enterprise activities and can bring multiple economic and

social benefits for the enterprise. Minghao Wei (2014) pointed out that behavior cultural strength is an important carrier of corporate cultural strength as well as the key to the practice of corporate cultural strength. Without behavioral culture strength, corporate cultural strength cannot be realized. In conclusion, behavior cultural strength is developed from the words and actions of employees and its final effect is demonstrated in the civilization, comprehensive quality, teamwork awareness, loyalty and sense of belonging to the enterprise and many other aspects of employees. Through institutional restriction, idea instruction, model guidance, behavioral norm and many other methods, it can successively shape and modify the employees' behaviors and make employees voluntarily regulate his or her own behaviors by the proposal of values as well as develop good behavioral habits and patterns consciously. In this way, it shall realize the transformation of the integration of behaviors and ideas of employees and further guarantee healthy and stable development of the enterprise to create economic benefit for the enterprise. Therefore, we put forward research on relations between corporate behavior cultural strength and organizational performance.

Creative learning strength and organizational performance



Shan Lin, et al. (2004) pointed out that the success of organizational innovation and study is closely related to the interaction between its explicit culture and implicit culture. Constant creativity and learning strength is the key for the enterprise to keep the ability of harmony. Xuanhua Liu (2006) thought that creative learning strength of an organization is the breakthrough point for improving the core competence of the organization as well as the guarantee for the existence of core competence. The creative learning strength of the organization could improve the organizational efficiency and success rate, thus improving organizational performance. The meaning of creative learning strength is about breaking the competition mode and thinking set of an enterprise. An enterprise can only maintain and improve its core competence through constant self-transcendence and competitive advantage acquisition. Zhipeng Zhang (2005) pointed out that the continuous innovation of an enterprise would promote the increase of enterprise benefit. The core competitiveness of an enterprise is actually related to organizational study and innovation. Therefore, we put forward research on relations between corporate creative learning strength and organizational performance.

According to the above reasoning of the relationship among corporate cultural

strength, its four dimensions and organizational performance, we propose the first hypothesis of the research and propose 3 sub-hypotheses based on this:

Hypothesis 1: corporate cultural strength has positive influences on organizational performance

Hypothesis 1a: spiritual cultural strength has positive influences on organizational performance

Hypothesis 1b: institutional cultural strength has positive influences on organizational performance

Hypothesis 1c: behavior cultural strength has positive influences on organizational performance

Hypothesis 1d: creative learning strength has positive influences on organizational performance

Corporate cultural strength and employee behavior

Qin Wang (2012) thought that corporate cultural strength must be revealed with the assistance of ideas and behaviors of enterprise employees. Min Zhang and Chuanming Chen (2005) concluded that corporate culture influences enterprise behavior through the guidance on the behaviors and values of the enterprise members and it is the most reactive, adaptive and imaginative basic element in personnel organization. The efficiency



of any enterprise behaviors shall be restricted by its members' behaviors. In the final analysis, corporate culture is created in practice by humans; and human factors are closely related to the corporate culture and environment (Minghua Li, 1993). Through the behavior of employees, a company's value pursuit and ideas become something tangible; through the behaviors of employees, customers and the society can clearly understand the company's culture. The employee behaviors in this paper mainly include organizational commitment, organizational citizenship behavior and turnover intention.

Corporate cultural strength and organizational commitment

Most scholars believe that cultural matching has a positive impact on organizational commitment. Hariis and Mossholder (1999) pointed out that "organizational culture can influence an organization's individual attitudes, such as individual members' commitment to the organization. Meglino, et al. (1998) argued that individuals with similar values adopt similar perceptions and actions so that they can accurately predict each other's actions, effectively interact with each other and reduce conflicts, resulting in improvement of satisfaction and organizational commitment. The empirical research on middle managers conducted by O' Reilly, et al. (1991)

showed that the higher the individuals align with organizations in value, the higher the organizational commitment of their members. The impact of personal-corporate culture matching on organizational commitment has also been empirically tested in our country. Xiaoping Liu, et al. (2003) argued that the continuous commitment of employees in foreign-funded enterprises will be more influenced by the organizational culture. In state-owned enterprises, the emotional commitment is more affected by the organizational culture. Through empirical research, Mingzheng Lai, et al. (2005) clearly pointed out that the ethical values of enterprises have a significant positive relationship with organizational commitment. That is, the higher employees' recognition of corporate ethical values, the higher the organizational commitment of employees. Xiaoping Liu (2003) listed personal-corporate culture matching as one of the influential elements of organizational commitment. Weide Huang, et al. (2005) also believed that the match between corporate culture and employee values will directly affect the level of employees' organizational commitment. Research by Weiqi Chen, et al. (2007) showed that the match between individuals and their jobs and organizations has a significant positive effect on employees' job satisfaction and organizational commitment. Yun Fan, et



al. (2012) believed that the motivation and fairness of corporate culture have achieved a positive correlation with the emotional commitment of knowledge-based talents through human resource management practices. Therefore, we put forward research on relations between corporate cultural strength and organizational commitment.

Corporate cultural strength and organizational citizenship behavior

When Organ (1988) constructed the theory of organizational citizenship behavior, he thought that there is a very close relationship between organizational culture and organizational citizenship behavior. When members of the organization accept the organization's culture, and personal values and organizational values are close, individual's organizational citizenship behavior will be more and better. Through the research of Goodman and Svyantek (1999) on organizational culture and organizational citizenship behavior, the explanation rate of the helping dimension by the enthusiasm and competition dimensions is 10.6%, while their explanation rate of the responsible organizational citizenship behavior is 14.5%. This shows that the organizational culture does have some impact on employees' organizational citizenship behaviors. In addition, research by Turnipseed, et al. (2000) on American and Romanian employees

found that social culture, organizational culture, and economic conditions do have significant impacts on employees' organizational citizenship behaviors. Quan Shi (2013) holds the opinion that organizational citizenship behaviors are generated by the existence of psychological contract and there exist many factors which can affect it; organizational culture is an important part of organizational citizenship behaviors. This is because whether employees show some behavior and how they show that are largely affected by the corporate cultural strength. According to Yalan Li (2016), corporate culture is related to the antecedent variables of most organizational citizenship behaviors. Behaviors are the superficial embodiment of culture, and the culture will generate corresponding behaviors. Therefore, we put forward research on relations between corporate cultural strength and organizational citizenship behavior.

Corporate cultural strength and turnover intention

Numerous scholars (Schein, 1985; Smircich, 1983; Lim, 1995) explained corporate cultural strength and turnover intention in theory, and the further empirical research includes Q-classification method adopted by Sheridan (1992) to study the influence of the specific cultural value on employees' attitude towards demission, and his



research is representative. Additionally, Nystrom (1993), Gunter & Furnham, et al. (1996) also studied such theme. Currently, research on corporate cultural strength's influence on employees' demission has two characteristics: First, it basically stays at the qualitative stage or the conclusion has not been in-depth enough, thus verification and in-depth discussion are required. Yang Zhou (2008) thought that the knowledge-based employees could not blend into the corporate culture is one of the main reasons for their demission in the mature career period; Xiuling Ding (2004) also thought that corporate culture is an important influencing factor of demission; Xingmin Duan and Yazhou Wang (2005) drew the conclusion that 7 factors such as corporate culture have important influences on knowledge-based employees' demission through empirical analysis, but their analysis on which dimension has influence on demission and influence degree is not in-depth enough. Second, much indirect evidence proves that corporate culture may have influence on demission but it doesn't mean that necessary connection exists between the two. Therefore, we put forward research on relations between corporate cultural strength and turnover intention.

According to the foregoing reasoning on the relations between corporate cultural strength and employee behaviors, we put

forward the second hypothesis of this research and put forward 3 sub-hypotheses based on it:

Hypothesis 2: corporate cultural strength has positive influences on employee behavior

Hypothesis 2a: corporate cultural strength has positive influences on organizational commitment

Hypothesis 2b: corporate cultural strength has positive influences on organizational citizenship behavior

Hypothesis 2c: corporate cultural strength has negative influences on turnover intention

Employee behaviors and organizational performance

In the 1980s, with the development of corporate culture theory, William Ouchi (1980) raised Theory Z based on people-oriented management, and emphasized the influence of organizational support, organizational atmosphere as well as employee relations on employees' productivity. This theory is supported in the empirical test, and include the following specific factors: organizational commitment, organization or managerial support, transformational leadership, organizational atmosphere, working environment and working conditions, authorization, sense of salary fairness, company system as well as company



culture (Riggle Edmondson & Hansen, 2009; Min Wu, Zhujun Liu, Jihong Wu, 2009; Lifeng Zhong, Zhen Wang, 2013; Zhen Wang, Meng Song, Jianmin Sun, 2014). Qing Qu and Ang Gao (2013) studied and found that vitality, market value as well as individual-organization fit is basically correlated with employees' work performance. In view of this, this research tends to the comprehensive view of behavior of performance and thinks that the dependent variables of organizational performance should cover employees' working ability, attitude and behavior. Ping Shuai and Liping Ge (2004) studied and drew the conclusion that employees' individual efforts are positively correlated with corporate performance and that employees would make greater contributions to corporate value if they made more efforts. Some research also drew the conclusion as follows: human resource agenda and activity aggregation influence 10% of operation performance of enterprise (Brockbank, Ulrich & Yakonich, 2002). Therefore, in this section, analysis on relations between the employees' behavior modes (including organizational commitment and organizational citizenship behavior as well as turnover intention) and organizational performance is conducted respectively.

Relations between organizational commitment and organizational performance

No consistent conclusion has been drawn by research on the relations between organizational commitment and job performance all the time. Steers (1977) thought that no significant relation exists between the two; however, in Porter's opinion (1974), organizational commitment is positively correlated with job performance according to his research. Meanwhile, Dubin, Champoux & Porter (1975) studied and thought that the employees would work more efficiently if their organizational commitment is higher. The domestic scholar Jiazhou Chen (2001) pointed out that the relations between the organizational commitment and employees' performance is correlated yet not strongly correlated due to the influence of random factors in the research on the relations between organizational commitment and employees' performance. Weipeng Hu and Kan Shi (2004) thought the organizations having higher employee commitment could have higher organizational performance. Guoan Yue, et al, (2006) pointed out that the divergence is generated probably because the researchers adopted different research objects or because the regulating variables exist between the organizational commitment and job performance and would show different relations in different situations. Yi Han (2007) studied and thought that



organizational commitment is overall positively correlated with job performance and that higher organizational commitment level would generate higher job performance. A lot of research thought organizational commitment could effectively predict the job performance. Ying Wang and Shengtai Zhang (2008) drew the conclusion that organizational commitment has influence on employees' behavior performance and personal welfare through carrying out empirical research on IT enterprises. Yapping Chang, et al. (2010) thought that organizational commitment has significant positive influences on employees' individual job performance. Therefore, we put forward research on relations between organizational commitment and organizational performance.

Relations between organizational citizenship behavior and organizational performance

Currently, the research on the influence of organizational citizenship behavior on some result variables mainly focuses on the aspects below: research on the influence of organizational citizenship behavior on the management performance evaluation and the relevant personnel management decisions; research on the influence of organizational citizenship behavior on the organization effect and organizational performance. Influence of organizational citizenship behavior on objective organizational performance evaluation.

The research of Vilela, et al. (2008) showed that in the evaluation on the final performance of computer salespersons, the sales performance accounts for 12% and organizational citizenship behavior accounts for 48%. Mackenzie, et al. (1998) took the insurance agents of 216 insurance companies as the subjects and found that the proportion of organizational citizenship behavior in their overall performance evaluation is up to 44%. Podsakoff, et al. (2000) integrated 11 studies in this field, and the meta-analysis showed that in the overall performance evaluation, task performance only accounts for 9.5% and organizational citizenship behavior accounts for 42.9%; the proportion in overall performance is 61.2% if combining the effects of task performance and organizational citizenship behavior, and that still could be explained as 46% after eliminating the error caused by the factor of method. In can be seen that in the performance evaluation, organizational citizenship behavior accounts for a higher proportion than the job performance, wherein, altruism behavior, civic virtues and sportsman morality dimensions have the most significant contribution to performance evaluation.

Influence of organizational citizenship behavior on subjective organizational performance evaluation. In the research on the subjective performance evaluation, the organizational citizenship behavior indexes mainly come from the



measurement of relation performance. Similarly, Podsakoff (2000) integrated 8 studies in this field and the meta-analysis showed that in the subjective performance evaluation, in-duty behavior accounts for 9.3% and relation performance accounts for 12% and that 42% variation in the performance evaluation could be explained if combining their effects. The above mentioned research shows that the important role of organizational citizenship behavior cannot be neglected regardless of objective or subjective performance evaluation.

Therefore, we put forward research on relations between organizational citizenship behavior and organizational performance.

Relations between turnover intention and organizational performance

Turnover intention means that the organization has lost the attraction to an employee and that the employee has generated the attitude and idea of leaving the organization. Mobley, et al. (1977) pointed out that turnover intention is a summative factor of many other factors related to employees' demission and that turnover intention is significantly correlated with employees' demission by empirical research. Therefore, knowing the employees' turnover intention in advance is helpful for an enterprise to take measures as early as possible to reduce employees'

voluntary demission rate, to keep operation stability and to improve the enterprise's operation performance. According to Fangguo Su and Shuming Zhao (2005), employees' turnover intention might generate negative influence on the enterprise performance. Therefore, we put forward research on relations between turnover intention and organizational performance.

According to the foregoing reasoning on the relations between employee behaviors and organizational performance, we put forward the third hypothesis of this research and put forward 4 sub-hypotheses based on it:

Hypothesis 3: Employee behavior has positive influences on organizational performance

Hypothesis 3a: Organizational commitment has positive influences on organizational performance

Hypothesis 3b: Organizational citizenship behavior has positive influences on organizational performance

Hypothesis 3c: Turnover intention has negative influences on organizational performance.

Corporate cultural strength, employee behavior and organizational performance



Corporate culture influences employees' value orientation, thus influencing their behavioral orientation, behavioral pattern, behavioral dynamics and efficiency, and eventually influencing overall operation efficiency of an enterprise (Fenfei Tian, 2002). Zhimin Yang, Lan Li, et al. (2005) pointed out that, corporate culture has the effect of standardizing enterprise employees and their behaviors as well as improving corporate business performance. Lijuan Wang (2006) also pointed out that, corporate culture can guide and shape employees' attitudes and behaviors, thus influencing a company's final business results. Ye Zhou, Hanhui Hu and Ancheng Pan (2006) argued that, corporate cultural strength has the functions of guidance, standardization, cohesion, motivation and radiation to an enterprise, and serves as a significant assurance to sustainable competitiveness, which can not only create outstanding motives to employees, but also can improve corporate performance. Meiyue Lu and Wenxian Zhang (2006) pointed out that, corporate culture is an intangible asset featured with brand effect, which has strong vitality and expansionary strength. Though it can't directly create economic benefits, it plays a role in an enterprise's benefits and determines its survival and development, with its influence on production, sales, market and consumption through management of employees. Thus, it is a significant cultural productivity with unlimited potential.

According to Hao Yang and Lianke Song (2013), in order to realize improvement in business performance, an enterprise must change the behaviors of its employees, and this requires guidance in their mindset. According to Maria (2016), employee behavior is an important tool that corporate cultural strength influences organizational performance. Qingkai Nie and Haoming He (2012) pointed out that, psychological contract constitutes the kernel of corporate cultural strength which directly influences organizational employee behaviors and further affects the organizational performance.

Given the above, we propose the fourth hypothesis in this paper:

Hypothesis 4: Employee behavior plays an intermediary role in the relationship between corporate cultural strength and organizational performance.

Research model

This study, based on the logic that corporate cultural strength influences organizational performance, constructs the theoretical analysis framework for the integrated relations among corporate cultural strength, employee behavior and organizational performance, and conducts theoretical exploration and empirical test of the direct influence and indirect influence (through employee behavior) of corporate cultural strength on organizational performance, which discloses the internal mechanism among the three factors.

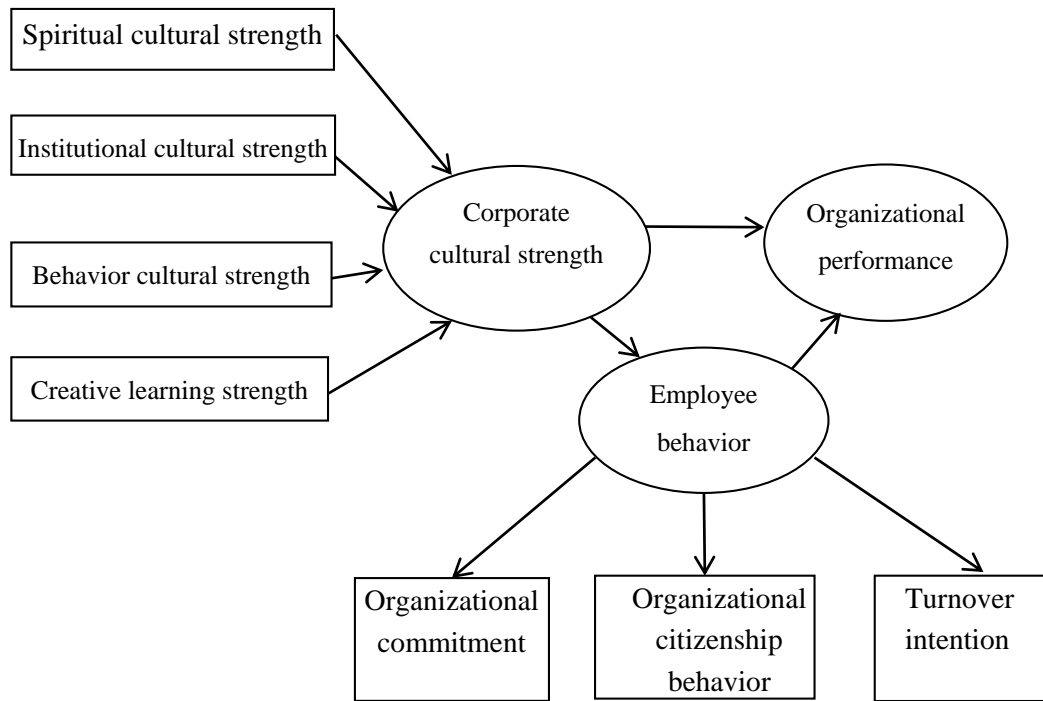


Figure 1 Research model

Research method and questionnaire distribution

The research mainly uses the study method of questionnaire survey in empirical research. The statistical analysis tools utilized are SPSS22.0 and Amos 22.0. For the formation of the questionnaire, it mainly follows the following steps: literature review, expert discussion, solicitation of opinions from senior management of enterprises,

selection of some enterprises in Guangdong and Guangxi for pre-test, and further questionnaire correction through the pre-test data to form the final questionnaire. In the finalized and distributed questionnaire, 19 questions are in relation to corporate cultural strength, and 5 questions are in relation to "spiritual cultural strength": SCI, SC2, SC3, SC4 and SC5; 5 questions for "institutional cultural strength": ICI, IC2, IC3, IC4 and IC5; 5 questions for "behavior cultural strength": BCI, BC2, BC3, BC4 and BC5; 4 questions for



"creative learning strength": CLI, CL2, CL3, CL4 and CL5. Employee behavior questionnaire includes 18 questions in relation to organizational commitment (Meyer & Allen, 1997); 20 questions in relation to organizational citizenship behavior (Farth, et al, 1997) and 7 questions in relation to turnover intention (Farth, et al, 1997). Finally, there are 6 questions in relation to organizational performance (Hongming Xie, et al, 2006).

In terms of questionnaire distribution and collection, we distributed and collected the questionnaires in the venue of the spring festival meeting of the China Private Education Union, which covers private education enterprises in Beijing, Zhengzhou, Xi'an, Guangzhou, Shanghai, etc. In terms of distribution quantity of the questionnaires, we determined the best sample quantity to be 5-10 times of the number of questions according to Nunnally and Berstein (1994). Based on the actual difficulty of questionnaire distribution, we distributed 400 questionnaires On April 18-20, 2017 and retrieved 384 questionnaires (valid questionnaires), with a recovery rate of 96%. According to Anderson and Gerbing (1998), 100-150 questionnaires should be the lowest limit of the sample quantity, thus the 384 valid questionnaires are of statistical significance. We used Likert 7-rating scale in the design of the questionnaire,

in which 1 represents "strongly disagree", 2 represents "disagree", 3 represents "somewhat disagree", 4 represents "fair", 5 represents "somewhat agree", 6 represents "agree", and 7 represents "strongly agree".

Data analysis results

Descriptive statistical analysis

The data analysis tool SPSS 22.0 is used to carry out descriptive statistical analysis on 384 samples, including gender, age, years of working, education background, working department and job level. Of all the samples, there are 189 male objects and 195 female objects, respectively accounting for 49.22% and 50.78% of the total samples. Most of the subjects are at the age of 30-39, accounting for 52.86%, and only 8 objects are older than 50 years, accounting for only 2.08%. In terms of years of working, 162 objects have worked for 6-10 years, accounting for 42.19%, and 110 objects have worked for more than 5 years, accounting for 28.55%. The subjects have different levels of education background, among whom 27 subjects are students from junior colleges and below, accounting for 7.03%, 309 subjects are undergraduates, accounting for 80.47%, 46 subjects are postgraduates, accounting for 11.98%, and 2 subjects are doctoral candidates,



accounting for 0.52%. In terms of working department, 156 subjects are from administrative departments, accounting for 40.63%, 104 subjects are from marketing departments, accounting for 27.08%, and the other subjects are from human resource, teaching and research, general manager office and other departments. In terms of job level, 203 subjects are first-line managers, accounting for 52.86%, 172 subjects are middle managers, accounting for 44.79%, and 9 subjects are senior managers, accounting for 2.34%.

Reliability and validity analysis

Before analyzing the questionnaire results, we must make sure the reliability

of the questionnaire to ensure measurement quality, and this process is measured through the Cronbach's α consistency coefficient. The coefficient determines the frequency of various question items to keep score consistency during variable measurement (Truran, 2001), and only a higher enough consistency coefficient can be satisfactory to the reliability requirement of variable measurement. The internal consistency coefficient is best for homogeneity test, i.e., detect whether various items of each factor measure the same and similar characteristics. The reliability inspection results of various variables in the scale are as shown in Table 1

Table 1 Statistical table of variable reliability inspection results

Variable	Classified Variable	Cronbach's value
Corporate cultural strength	Spiritual cultural strength	0.874
	Institutional cultural strength	0.849
	Behavior cultural strength	0.816
	Creative learning strength	0.873
Corporate cultural strength	Overall Cronbach's value	0.956
Employee behavior	Organizational commitment	0.587
	Organizational citizenship behavior	0.683
	Turnover intention	0.942
Employee behavior	Overall Cronbach's value	0.926
Organizational performance	Organizational performance	0.897
Total scale reliability Cronbach's value		0.965

According to Table 1, except the reliability of the variable "organizational commitment" is 0.587 (relatively lower), the reliability values of all the other variables are above 0.60. According to

Nunnally (1978) and Nunnally & Bernstein (1994), the reliability of variable scale is acceptable when the value of Cronbach's α is above 0.6

Table 2 Construct validity analysis result (confirmatory factor analysis)

CFI	TFI	X ²	Df	SRMR	RMSEA	90%CI
Comparative fit index	Tucker Lewis index			Standardized Root Mean Square Residual	Root-mean-square error of approximation	90% confidence interval
0.935	0.923	208.921	146	0.055	0.058	0.039-0.075
>0.9	>0.9			<0.08	<0.08	

Table 2 shows that Confirmatory Factor Analysis Results ($\chi^2/df=1.43$, CFI=0.935, TFI=0.923, SRMR=0.055, RMSEA=0.058), the indexes have met the requirements, which has illustrated the better model fit. Jietai Hou (2006) has pointed out that generally speaking, the

standardized loading is expected to be 0.6 or above; if it is less than 0.5, the corresponding index should be considered to be deleted. The standardized path of confirmatory analysis shown that all the standardized factor loading capacity are above 0.5

Correlation analysis

Test of relations between corporate cultural strength and organizational performance

Table 3 Analysis on correlation between corporate cultural strength and organizational performance

Organizational performance	Corporate cultural strength	Spiritual cultural strength	Institutional cultural strength	Behavior cultural strength	Creative learning strength
Spearman correlation coefficient	0.793	0.747	0.739	0.739	0.721
P	<0.001	<0.001	<0.001	<0.001	<0.001

According to results of correlation analysis between corporate cultural strength and organizational performance in Table 3, the correlation coefficient of corporate cultural strength, spiritual cultural strength, institutional cultural strength, behavior cultural strength, and creative learning strength is 0.793, 0.747, 0.739, 0.739 and 0.721 respectively, with

their P values less than 0.001 unexceptionally. In conclusion, corporate cultural strength, spiritual cultural strength, institutional cultural strength, behavior cultural strength and creative learning strength are all positively correlated with organizational performance.

Test of relations between corporate cultural strength and employee behavior

Table 4 Analysis on correlation between corporate cultural strength and employee behavior

Corporate cultural strength	Employee behavior	Organizational commitment	Organizational citizenship behavior	Turnover intention
Spearman correlation coefficient	0.807	0.590	0.785	0.725
P	<0.001	<0.001	<0.001	<0.001

According to results of correlation analysis between corporate cultural strength and employee behavior in Table 4, the correlation coefficient of employee behavior, organizational commitment, organizational citizenship behavior and turnover intention is 0.807, 0.590, 0.785 and 0.725 respectively, with their P values less than 0.001 unexceptionally.

In conclusion, employee behavior, organizational commitment, and organizational citizenship behavior are all positively correlated with corporate cultural strength, and turnover intention is negatively correlated with corporate cultural strength, which means higher corporate cultural strength corresponds to lower turnover intention.

Test of relations between employee behavior and organizational performance

Table 5 Analysis on correlations between employee behavior and organizational performance

Organizational performance	Employee behavior	Organizational commitment	Organizational citizenship behavior	Turnover intention
Spearman correlation coefficient	0.778	0.572	0.763	0.694
P	<0.001	<0.001	<0.001	<0.001

According to results of correlation analysis between employee behavior and organizational performance in Table 5, the correlation coefficient of employee behavior, organizational commitment,

organizational citizenship behavior and turnover intention is 0.778, 0.572, 0.763 and 0.694 respectively, with their P values less than 0.001 unexceptionally. In conclusion, employee behavior,

organizational commitment, and organizational citizenship behavior are all positively correlated with organizational performance, while turnover intention is negatively correlated with organizational performance, which means higher organizational performance corresponds to lower turnover intention.

Structural equation model analysis

Three conditions established on the basis of mediating effect: independent variables and mediating variables respectively have significant relations with dependent variables; independent variables have significant relations with intermediating variables; after a mediating variable is inserted, the relations between an independent variable and a dependent variable become weaker (Baron & Kenny, 1986; Minglong Wu, 2009). According to our previous study, it's detected that

corporate cultural strength has significant influence on employee behavior and organizational performance; meanwhile, employee behavior also has significant influence on organizational performance; thus, we observe the variation of corporate cultural strength's influence on organizational performance after employee behavior is inserted, and further determine whether employee behavior has mediating effect. According to AMOS20.0 verification results, both corporate cultural strength and employee behavior have significant influence on organizational performance, and corporate cultural strength also has a significant influence on employee behavior. Therefore, these empirical results are in line with the conditions for the establishment of mediating effect (Baron & Kenny, 1986; Minglong Wu, 2009). The following tables will analyze the influence mechanism and the outcome of mediating effect from the fit index of mediating effect, the indirect effect analysis, and the structural equation model of mediating effect.

Table 6 Fit index of mediating effect model

X^2	Df	p	CFI	TFI	RMSEA	SRMR
96.475	18	<0.001	0.973	0.95	0.107	0.024

According to the fit indexes of the mediating effect model in Table 6, X^2/df = 5.36, P value is less than 0.001, CFI =

0.973, TFI = 0.95, RMSEA = 0.107, SRMR = 0.024, wherein, X^2/df is larger than 3, RMSEA is larger than 0.05, and

the actual values of all the other fit indexes have met the standard, indicating that the fit of this data to the model is acceptable.

In order to verify the mediating effect of employee behavior, we use the path analysis method to take organizational performance as a dependent variable, and we input corporate cultural strength firstly and employee behavior secondly, and then we find that the correlation

between corporate cultural strength and organizational performance ($\beta=0.243$) is weaker than before ($\beta=0.879$), indicating that employee behavior has mediating effect on the relations between corporate cultural strength and organizational performance, and the mediating effect is obvious ($\beta = 0.634$, $P = 0.001$). Relations between corporate cultural strength, employee behavior and organizational performance: direct relations and indirect relations are as shown in Table 7

Table 7 Indirect effect analysis (Standard solution)

Indirect effect	Estimated value	Standard error	Estimated value/standard error	P
Corporate Cultural Strength - Employee behavior - organizational performance	0.558	0.171	3.263	0.001

According to Table 7, P value is = 0.001, less than 0.005, with statistical significance, showing mediating effect.

Research conclusions and future study

Through empirical research and theoretical analysis, this paper validates the research model of the relations among corporate cultural strength, employee behavior and organizational performance. The proposed hypotheses have been tested, and the conclusions are drawn as follows: First, corporate cultural strength is composed of spiritual cultural strength, institutional cultural strength, behavior cultural strength and

creative learning strength. Empirical test results show that all the four components of corporate cultural strength have a positive and significant influence on organizational performance, indicating that effective corporate cultural strength is helpful to improve organizational performance. Second, corporate cultural strength has positive influences on organizational performance. The verification results show that corporate cultural strength has a positive influence on the two components of employee behavior, namely, organizational commitment and organizational citizenship behavior, and is negatively correlated with turnover intention (another component of employee behavior). This shows that corporate cultural strength affects employee

behavior, and effective corporate culture will be recognized by employees. Third, employee behavior has a positive influence on organizational performance. The verification results show that organizational commitment has a positive influence on organizational performance; organizational citizenship behavior has a positive influence on organizational performance, while turnover intention has a negative impact on organizational performance. This indicates that good organizational commitment and organizational citizenship behavior are conducive to the improvement of organizational performance, while turnover intention has a negative effect on organizational performance (that is, the higher the turnover intention, the lower the organizational performance). Fourth, employee behavior has an obvious mediating effect on the relations between corporate cultural strength and organizational performance. The test results show that corporate cultural strength affects employee behavior, while employee behavior affects organizational performance.

We regard corporate cultural strength as the antecedent variable in the study of employee behavior and organizational performance, which has significant theoretical and practical significance. In theory, corporate cultural strength has become a factor which is difficult to define, yet plays a sustaining role in business management. Besides, it is a significant component of the core competitiveness of an enterprise. In practice, the role and effect of corporate cultural strength in business operation

and management practice cannot separate from an enterprise's business activities. Corporate cultural strength stems from practice and in turn guides practice, and practice is the embodiment of the maximum value of corporate cultural strength. Therefore, it can be said that important theoretical and practical significance exists in researching the influence of corporate cultural strength on organizational performance.

This paper mainly discusses the relations among corporate cultural strength, employee behavior and organizational performance in Chinese private education industry. Among the variables studied, there are still many issues worthy of in-depth exploration and study due to the incompleteness of the scale system of corporate cultural strength. Due to limitations of conditions, resources and time, this paper has certain defects, and certain areas still need further study. Combined with the research process of this paper, and in consideration of the research conclusions and limitations, the author believes that the following aspects should be highlighted in the future study: First, follow-up study may be orientated to the relations between relevant variables. Second, quantity and scope of sample. If time allowed, follow-up study may have further discussions on the influence of corporate cultural strength and employee behavior on organizational performance through experimental study and longitudinal study in a more scientific and precise manner. Third, follow-up study may be done through comparative observation and cross-layer analysis.

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Antecedents of e-commerce adoption in Thai SMEs

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Abstract

E-commerce (EC) is viewed as a new strategy to survive and stay competitive in the highly changeable business environment. In this paper, the model of EC antecedents and effects is examined in nine Thai managers within the targeted firms operating in a variety of industries. Results indicate that the adoption of EC is contingent upon organizational, environmental, and technological elements, which in turn affects company performance. The modes of EC operations include brand awareness, cost saving, business transaction and information providing, customer relationship, and process improvement. Different EC applications has been adopted, comprising e-mail, E-SCM, social media platforms, website and CRM. The implications of the findings in relation to EC theory and practice are discussed. This paper provides useful insights into the viewpoints of EC adoption in Thai SME context, which practitioners in similar settings may find useful.

Keywords: E-commerce adoption, Firm performance,
SMEs, Developing countries

Introduction

E-commerce (EC) can be a major driver for growth and economy transformation in developing countries (Hajli et al, 2014) and the growing use of internet platforms can be one of critical factors to create major changes for Thailand's economy transformation. The current Thai government aims to transform Thailand's economic structure to becoming a value-based and innovation-driven economy. Therefore, the research focusing on Small and Medium Enterprises (SMEs) is critical (Awa et al, 2015) because SMEs play a significant role in the country's economic development, particularly Thailand. SMEs account for 99.72% of the total number of enterprises and contribute to 41.1% of the country's GDP (OSMEP, 2015).

SMEs are increasingly encountered severe competition both from their domestic and foreign competitors (Abebe, 2014). In order to stay competitive, the use of internet offers SMEs "to build competitive advantage through improved transparency and communications, real-time and value-added knowledge sharing, operational flexibility and efficiency, and network externalities" (Awa et al, 2015, p. 144). The adoption of EC is increasing at the global level (Abebe, 2014; Hajli et al, 2014), however, Internet platforms are still under-exploited by SMEs in the developing countries (Awa et al, 2015, p. 144), particularly Thailand (Sena-noi and

Jaroenwanit, 2011). The survey of Electronic Transactions Development Agency or ETDA (2017) found that the value of EC in Thailand during 2014-2016 was increased by 10.41% from 2014 to 2015 and by 12.42% from 2015 to 2016. In spite of the growing number of EC businesses in Thailand, SMEs are not exploiting EC to its full potential. The majority of SMEs are located in Bangkok and metropolitan area and have utilized the Internet more for advertising their stores and products and less for buying and selling products through the Internet (Choochinprakarn, 2016, p.2). Moreover, the information system (IS) research has mainly focused on large firms (Abebe, 2014; Ghobakhloo et al, 2011) in developed countries (Hajli and Sims, 2014) and the studies on adoption and use of EC in SMEs, particularly in developing countries (Chatzoglou and Chatzoudes, 2016; Ghobakhloo et al, 2011; Ifinedo, 2011) like Thailand is limited (Sena-noi and Jaroenwanit, 2011). Ghobakhloo et al (2011) note that small and large businesses have different characteristics and contexts, so that the findings of previous studies on large businesses cannot be generalized and applied to smaller firms. Therefore, there is a noteworthy need to investigate the causes behind such relatively low adoption of EC in SMEs, particularly in Thai context.

Although the scholars recently pay more attention to study EC acceptance in SMEs, the literature has mainly been narrowed to exploratory research that

study numerous factors impacting EC acceptance in SMEs (Abebe, 2014, p. 101). Very few research has constructed on the prior studies while several studies have developed a unique conceptual framework, thereby failing to build on existing knowledge (Chatzoglou and Chatzoudes, 2016). This paper enriches the literature as it uses technology-organization-environment (TOE) framework as a basis for analysis. TOE framework is the most popular methodological approach and has been found to “provide consistent empirical support” in the literature (Ghobakhloo et al, 2011, p. 1243). In addition, there is a lack of integrative framework to clarify EC adoption and its impact on firm performance. Thus, the integrative framework is significant for future studies, policy makers and practitioners (Li and Xie, 2012). Furthermore, while prior studies provide valuable insights into operational aspects of EC adoption, there is a dearth of empirical research on the implementation process for EC adoption (Chatzoglou and Chatzoudes, 2016). A holistic understanding of the subject under study is necessary, especially for SMEs where financial resources are restricted (McCarthy et al., 2014). Therefore, qualitative research can be used to gain deeper understanding of the phenomenon of interest (Leung, 2015). Therefore, this paper provides a more holistic view which covers a wider variety of cases in SME context in order to build greater depth and richness into the knowledge base.

This paper aims to cover the limitations of the literature described above. Its main objective is to examine the antecedents and consequences of EC adoption in SMEs. Specifically, the research questions of this paper are as follows: (1) what factors are critical to successfully implementation of EC in Thai SMEs? (2) how do those factors support and motivate Thai SMEs to adopt of EC applications? (3) what are the outcomes achieved by Thai SMEs that implement EC in their operations? (4) how does EC adoption improve organizational performance? The subsequent sections are structured as follows. First, it presents a review of literature on the determinant factors influencing EC adoption and the relationship between EC adoption and firm performance in SMEs in developing countries. Then a theoretical framework are proposed. Next, research methodology are presented and results are discussed. Finally, conclusions and implications as well as future research directions are drawn.

Literature review

EC definition and its benefits to SMEs

There are various definitions of EC and most scholars focus on “the use of the internet to process and facilitate business” (Hajli and Sims, 2014, p. 720). EC is defined as a wide range of online business activities relating to products

and services (Jahanshahi et al, 2013, p. 850). According to Abebe (2014, p. 102) explains EC from the B2C viewpoint as “the buying and selling of information, products and services via computer networks”. Following Ghobakhloo et al (2011, p. 1243), this paper describes EC as “utilization of ICT and applications to support business, operation, management, and decision making in business”.

With the advancement in information communication technology (ICT), the benefits of EC comprise cost reduction (e.g. for transactions, operation and marketing), ease of accessibility for end users, efficiency of business processes and dealing with suppliers, and ease of connection with potential customers in the global market (Hajli and Sims, 2014; Jahanshahi et al, 2013). EC can be a competitive tool to offset SMEs’ resource constraints and size disadvantages (Abebe, 2014) as it reduces costs and increases their geographical reach (Abebe, 2014; Hajli and Sims, 2014; Yasin et al, 2014). Although EC provides SMEs the great opportunities to increase their performance and achieve competitive advantage, most of SMEs are likely to use the internet more to send mails, transfer files or gather information and less to develop services, processes, business automation and internal processing of business information and knowledge (Awa et al, 2015, p 144). Therefore, the guidelines on how to

inspire and encourage extensive acceptance of EC in SMEs are needed.

The factors influencing EC adoption

According to literature review, there are several elements have been employed to influence EC adoption. Based on the TOE framework (Tornatzky and Fleischer, 1990), the antecedences of EC adoption comprise three dimensions as follows:

Technological context

Technological level of an organization has been reported as a critical factor that impacts the adoption and implementation of an IS/IT innovation such as EC (Chatzoglou and Chatzoudes, 2016; Ghobakhloo et al, 2011). In this paper, perceived benefits and government policies and supports are proposed to assess the level of technological readiness of SMEs.

Perceived Benefits. Perceived benefits involve the relative advantages that EC can provide to the embracing company (Ifinedo, 2011, p. 259). In accordance with Roger’s (1983) DOI theory, perceived relative advantage is the determinant factor of new systems adoption. Likewise, Davis’s (1989) Technology Acceptance Model (TAM) indicates that perceived usefulness of a system is a precursor factor of new technology acceptance and usage process. Correspondingly, Al-Bakri and

Katsioloudes (2015) have found that perceived usefulness is one of key factors affecting EC acceptance and usage behavior in SMEs in Jordan. Ghobakhloo et al (2011)'s findings are consistent with Roger's (1983) DOI model and Davis's (1989) TAM model and have revealed that CEOs of SMEs who recognize the benefits of EC are more likely to embrace EC applications. Similarly, Hajli and Sims (2014, p. 726) suggest that the better awareness and understanding of the advantages of EC adoption the more likely EC are accepted and used by SMEs in developing countries. Therefore, perceived benefits is likely to encourage SMEs to adopt EC.

Government Policies and Supports.

Government plays an important role in enhancing e-business initiatives in SMEs in developing and emerging countries (Li and Xie, 2012). Jeon et al (2009) have discovered that government support is the most significant determinant factors for e-business adoption process in Korean SMEs. Likewise, the findings of Durbhakula and Kim's study (2011) have suggested that government policy and vision impact on e-business enhancement. The government's policies, visions, strategies and support programs, taxes and tariffs, regulatory frameworks, subsidies and support infrastructures (Awa et al, 2015, p. 148) will formulate the e-readiness (e.g. quality of IT infrastructure) in every country (UNCTAD, 2013). Then e-business improvement will increase on the whole country (Chatzoglou and

Chatzoudes, 2016). Therefore, government policies and supports are likely to foster SMEs to adopt EC.

Organizational context

Chang (2010, p. 106) describes organizational perspective as the "enterprise's availability of financial and human resources". The literature has reported that an IS innovation can be successfully accepted and implemented only when adequate organizational resources are provided and wisely managed (Chatzoglou and Chatzoudes, 2016; Ifinedo, 2011). These resources may comprise adequate staff, technical skills and funding (Chatzoglou and Chatzoudes, 2016). In this paper, organizational IS competence and management commitment and support are proposed to measure the level of organizational readiness of SMEs.

Organizational IS Competence.

Organizational IS competence involves the level of knowledges, experiences, technical skills and expertise of IS technologies in the organization (Ghobakhloo et al, 2011). The more knowledge a company has about technological innovation, the more likely the firm intends to adopt new technologies (Ifinedo, 2011). Al-Bakri and Katsioloudes (2015) have found that managers' knowledge and awareness of IT and IS as well as IT skills of managers and organizational members influence the adoption of EC systems in SMEs in Jordan. Similarly, Hajli and Sims (2014) have discovered that organizational

awareness in terms of ICT literacy and English language skills of employees and managers impact the adoption process of EC in SMEs in Iran. However, owners and employees of SMEs and micro firms seem to lack sufficient knowledge of IT and e-business, resulting in a delay in the growth of ICT use in their businesses (Ifinedo, 2011). The study of Ifinedo (2011) has revealed that a lack of IS competency hinders SMEs to successfully adopt internet and e-business technology (IEBT). Therefore, SMEs will successfully adopt EC where their executives and organizational members have adequate IS skills and expertise.

Management Commitment and Support. Top management commitment and support is defined as the involvement, enthusiasm, motivation and encouragement provided by management regarding the reception of IS technologies (Ifinedo, 2011, p. 260). Ifinedo (2011) have reported that management commitment/support is positively related to successful IEBT adoption in SMEs. When top managers understand the important of computer and related technologies for their companies, they are inclined to play a vital role in motivating other members in the organizations to accept such technologies (Chatzoglou and Chatzoudes, 2016; Ghobakhloo et al, 2011). Moreover, these managers tend to reserve resources to technology acceptance (Thong et al, 1996). Previous research have showed that management

support and commitment can facilitate and speed up the new technologies acceptance in SMEs (Ghobakhloo et al, 2011). Therefore, management commitment and support is likely to promote SMEs to adopt EC.

Environmental context

External environment of an organization has been reported in the literature as a driver for IS adoption in large and small businesses (Ghobakhloo et al, 2011). In this paper, the main sources of external pressure to accept technological innovations in SMEs are competitive pressure and financial resources availability (Ifinedo, 2011).

Competitive Pressure. Competitive pressure has been reported in the literature as one of the best predictors of IS implementation in large and small enterprises (Ifinedo, 2011). SMEs adopt and use EC strategies with an aim to stay competitive and innovative as a necessity for their survival (Ghobakhloo et al, 2016). Correspondingly, Al-Bakri and Katsioloudes (2015, p. 732) have found that local and global competitions are the drivers of managers/owners' decisions in small firms to implement EC systems in order to maintain their competitive position. As such, SMEs in the industries having high rate of innovation and fierce competitive challenge are likely to adopt e-business (Chatzoglou and Chatzoudes, 2016; Ghobakhloo et al, 2011). Therefore, an environment of intense competitive pressure tends to lead to EC adoption in SMEs.

Financial Resources Availability. A lack of financial resources is an obstacle to IEBT utilization in SMEs (Ifinedo, 2011; Yoshino and Taghizadeh-Hesary, 2016). Such resources shortage would require to source for funding as they believe that the adoption of online businesses and related solutions are valuable for their businesses (Ifinedo, 2011). However, SMEs cannot easily obtain finance from local financial institutions (Yoshino and Taghizadeh-Hesary, 2016). The weak financial situation of SMEs and the struggle to invest in complicated IS have been reported as major barriers in previous research results (Somuyiwa and Adebayo, 2011). Al-Bakri and Katsioloudes (2015, p. 732) have found that financial readiness influences SMEs in Jordan to adopt EC. According to Al-Bakri and Katsioloudes (2015, p. 732), financial readiness is “the availability of financial resources to pay for EC system adoption costs, use of subsequent enhancement and continuing expenses such as communications charges and usage fees”. Ifinedo (2011, p. 267) concludes that SMEs with better financial resources tend to accept IEBT more than their counterparts with less resources. Therefore, the availability of financial resources tend to drive EC adoption in SMEs.

The relationship between EC adoption and firm performance

According to TOE framework, “the dependent variable can be adoption/ acceptance, receptivity, business performance, business value, or a combination of other relevant variables” (Ifinedo, 2011, p. 258). Following Ifinedo (2011, p. 259), the first dependent variable proposed in this paper is “adoption, which is operationalized with measures relating to frequency, extent of use, and criticality of the use of such technologies in business operation”. Moreover, following Abebe (2014), the other dependent variable proposed in this paper is firm performance, which is operationalized with measures regarding “annual sales growth rate”. Abebe (2014, p. 106) suggests that the annual sales growth rate is suitable for a study of the effect of EC on business performance in SMEs because one of the major benefits of EC adoption is the ability to attain higher sales volume from both existing and new customers. Likewise, EC-based firms have been reported to achieve high annual revenues, when compared to those companies that have not capitalized on the potential of EC (Yasin et al, 2014, p. 780). Accordingly, Abebe (2014) has proved that EC adoption has a positive impact on SME’s annual sales growth rate and suggests that adopters of EC technology tend to have higher sales growth level than non-adopters. Therefore, the adoption of EC applications tend to improve firm performance in SMEs.

Conceptual framework

In order to develop a framework that integrates previous research findings, this paper reviews literatures relating to factors affecting EC adoption and its effect on firm performance and then builds on Tornatzky and Fleischer (1990)'s TOE framework (see Figure 1). TOE framework has been widely used as a basis model in inspecting EC acceptance. According to TOE framework, the adoption of EC is contingent upon organizational, environmental, and technological factors. This framework is consistent

with Rogers' (1983) diffusion of innovation (DOI) theory as it emphasizes on both internal and external aspects of the organization, as well as technological aspects in a study of drivers for new technology dispersion (Ghobakhloo et al, 2011, p 1240). Chatzoglou and Chatzoudes (2016, p. 334) point out that TOE framework improve intra-firm innovation diffusion, so that it is more comprehensive than other models. Therefore, TOE framework is used in this paper as its validity is confirmed by the literature. Moreover, it is suitable with the context and objectives of the current study.

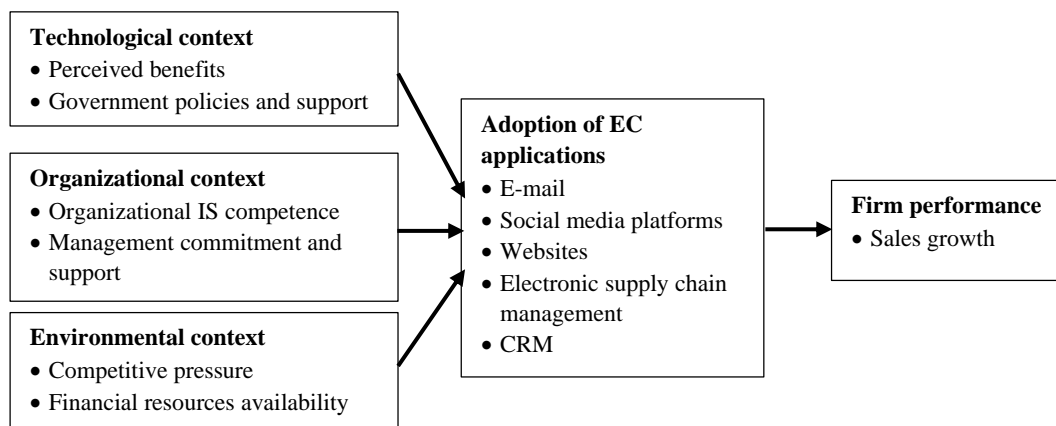


Figure 1 Conceptual framework

Methodology

A qualitative method was employed in this paper in order to gain a rich

understanding from the participants' own perspectives. The interview technique was used to collect data from nine CEOs or managers of SMEs who adopt EC

applications to support their business operations. This paper provides a more holistic understanding which covers a wider variety of cases in SME context in order to build greater depth and richness into the knowledge base. A sample of firms were the members of Thai Chamber of Commerce and located in Bangkok and the metropolitan areas. They were invited by telephone to participate in the interview. The

respondents' information are presented in table 1. Semi-structured questions were used as an instrument for the interview. The interviews took approximately 30 to 60 minutes. Data collected through interviews were recorded through hand-written notes and tape recordings. Content analysis was employed to identifying patterns in the interview data and grouping the data by themes and phases (Apulu et al., 2011).

Table 1 Respondent information

Description	No. of participants	%
<i>Gender of respondent</i>		
Male	8	88.89
Female	1	11.11
<i>Position of respondents</i>		
Managing director (MD)	4	44.45
Deputy MD	1	11.11
Senior officer (product development)	1	11.11
General manager (GM)	1	11.11
Manager (sales and marketing)	1	11.11
Manager (planning and policy)	1	11.11
<i>Industry</i>		
Sport equipment, stationary and office Supplies	2	22.23
Plastic	1	11.11
Food, vegetables and fruits processing	3	33.33
Restaurant	1	11.11
Auto parts	1	11.11

Reliability and validity of this study can be tested through different approaches. Generalizability is one of the measures for the validity of qualitative research depending on the case selected and examined (Patton, 2002). In this study, purposeful sampling was utilized for the identification and selection of information-rich informants related to the studied phenomenon (Patton, 2002). This ensures that participants are mostly knowledgeable about or experienced with a subject of interest (Cresswell and Plano Clark, 2011). Moreover, the rigor of qualitative methods usually depend on criterion for determining number of respondents based on type of analysis proposed. This study focuses on saturation (i.e., gaining a comprehensive understanding by continuing to sample until no new substantive information is acquired) (Palinkas et al, 2015), thereby collecting data from nine interviewees can achieve breadth of understanding and aims of the study. Saturation is determined a priori on the basis of an existing theory or conceptual framework (Palinkas et al, 2015). For data extraction

and analysis, the respondent verification was adopted in this study to increase validity of the research processes. The interview transcripts and data analysis were sent to participants for approval the clarification of the research and thereby improving the quality of the research (Leung, 2015).

Result and discussion

Interviewees were asked to state EC applications adopted in their operations and the reasons behind their decision to adopt EC. The findings showed that SMEs have adopted EC because it offers a good opportunity to improve their business processes and performance. A wide range of EC operation modes adopted by SMEs were grouped into categories according to the extensive study on the operation modes of EC implementation (Khuong and Krachang, 2005). The operation modes of EC are presented in table 2 and table 3 presents the adoption of EC applications in SMEs.

Table 2 E-commerce operation modes

	Brand awareness	Cost saving	Promotion & advertising	Transaction	Information providing	Customer relationship	Process Improvement
1. Wattana Intergroup Co., Ltd.				√	√		√
2. Siam Victor Corp. Co., Ltd.	√	√	√	√	√	√	√
3. GTECH OHM Co., Ltd.	√	√	√		√	√	√
4. Sweet Bee Farm Co., Ltd.	√	√	√		√		√
5. Han-Ta-Dindang Restaurant	√		√		√		√
6. The Cap car Company	√	√	√	√	√		
7. Flugel Co., Ltd.	√	√	√	√	√	√	
8. Erawan Food Co., Ltd.	√	√	√		√	√	√
9. Seth Intertrade Co., Ltd.	√		√		√		

Table 3 Adoption of e-commerce applications

	E-mail	E-SCM	Social media	Website	CRM
1. Wattana Intergroup Co., Ltd.				√	
2. Siam Victor Corp. Co., Ltd.	√	√	√ (FB, Line, Twitter, YouTube)	√	
3. GTECH OHM Co., Ltd.	√	√	√ (FB, Line)	√	√
4. Sweet Bee Farm Co., Ltd.		√	√ (FB)	√	
5. Han-Ta-Dindang Restaurant			√ (FB, Line, YouTube)	√	
6. The Cap car Company			√ (FB, YouTube)		
7. Flugel Co., Ltd.			√ (FB, Instagram, Line)	√	√
8. Erawan Food Co., Ltd.	√	√	√ (FB, Line)	√	
9. Seth Intertrade Co., Ltd.	√		√ (FB, Instagram)	√	

E-commerce operation modes

Brand awareness/image building.

The results showed that most of SMEs implement this mode to provide detailed information about the firm and its offerings to their customers. Rich messages with text, audio, and video play the significant role in attracting potential customers and creating a better customer experience (Laudon and Laudon, 2014). Social media platforms such as Facebook, Line, Instagram, and YouTube are their primary modes of communication. One respondent stated that:

We create video content – e.g. cooking information to demonstrate cooking techniques – in our news feed in order to increase our presence on Facebook. Facebook video is a great way to increase the audience's attention, reach and engagement.

A two-way conversation is a dialogue, where brands speak and listen to their customers, responding promptly to their needs and wants (Edgecomb, 2017; Newman, 2016). Four respondents said that:

A two-way conversation on social media, particularly Facebook and Line helps us directly connect brands and consumers (especially aged 25 – 34 years old). It supports us to know our customers' expectations and satisfaction, thereby improving our customer service and then improving brand royalty.

Therefore, the results support the study's findings of Öztamur and Karakadılar (2014, p. 513) suggesting that social media applications are the effective tools in building brand awareness and enhancing brand reputation than generating leads and increasing sales.

Cost saving. The findings revealed that most of SMEs adopt EC applications such as e-mail, electronic supply chain management (E-SCM) and website, with an aim to reduce the costs of the administration of the invoice to clients and the printing brochures. One respondent stated that:

We create digital brochures instead of printed leaflets as an alternative way for offering our customers to access the same information. Online brochures help us cut down on the amount we need to get printed. Printed advertising materials are costly, especially when they need to be updated.

E-SCM is derived from the development of supply chain with the utilization of the information technologies and Internet (Tan and Trang, 2017). It facilitates the greater exchange of information between the companies in the supply chain, and the companies can take advantages of a firm's internal and external linkages in order to eliminating duplication and errors of different logistics activities, reducing the level of paperwork and lowering inventory levels (Barutcu and Tunca, 2012, p. 1050). Two respondents stated that:

E-SCM helps to exchange of data on goods and inventories, and support efficient coordination and collaboration (e.g. sales promotions) across the whole organization. Establishing a single point of information and centrally managing data can accelerate processes, save time, and reduce back office staff costs. Especially, we can exchange data of our products, monitor inventories, and manage changes to the product assortment.

Therefore, the firms that implement E-SCM can reduce operating costs, improve productivity and then increase revenue.

In addition, the online advertising in social networks are more cost effective than the traditional marketing tools. The respondents indicated that social media platforms are the main focus on online advertising and marketing because the traditional platforms, particularly television, newspapers or other platforms are expensive and some companies cannot afford such expenses. One respondent stated that:

Social media is less expensive than other types of marketing – especially offline channels, like newspaper, radio and television – and it can easily be used to control our marketing programs – for example, when we shares updated content and sales promotion with fans on Facebook.

Therefore, SMEs are more appropriate to utilize social media platforms because of their higher need to cover marketing

communications expenditures (Öztamur and Karakadılar, 2014).

Promotion & advertising. The findings discovered that e-mail and social media platforms such as Facebook, Line, Twitter, YouTube, and Instagram are used among SMEs as a marketing strategy tool to reaching prospects and customers, promoting their products/services locally and internationally and creating value for customers. The companies that emphasize on their social media platforms tend to concern the number of likes, the frequency of update, richness of the content and interaction of engagement (Öztamur and Karakadılar, 2014). One respondent stated that:

We update our Facebook page every day and post more than one content which are rich and related text, audio, and video – so that interaction of the engagement with customers is indeed effective. At the same time, we respond almost every inquiry and comment of the customers as well as the product reviews by the customers are shared and posted.

In addition, social media marketing campaigns are also viewed as good means of attracting new customers. One respondent stated that:

We attempt to attract our followers with promotions, contests, giveaways or other offers – then once we have a good following we can focus on more personalized social media marketing promotions to inspire and retain them.

On the other hand, e-mail is rarely utilized to send a new product release and promotion campaigns to their existing mailing list because consumers feel less acceptable for companies to send them promotional messages via e-mail. However, e-mail is an appropriate marketing communications strategy and marketing tools for the exchange of products, services or information between businesses, rather than between businesses and consumers or end users. Three respondents stated that:

We use email only for informing our wholesalers, retailers and business partners (B2B) about our new products or services offerings.

Therefore, this study's findings suggested that the keys success in social media utilization are as follows: (1) the purpose of business being on social media, (2) understanding the demographics of several social media platforms as different platforms appeal to different audiences.

Business Transaction and information providing. According to the results, SMEs highly recognize the benefits of EC but they have not employed the full functionality of EC, particularly placing order via the website. Only a few of respondents develop their own website and use it to interact with their customers and to complete online transaction. The majority of them have their own websites only for providing the necessary information about the

company, products/services, and contact details. Three respondents stated that:

The advantages of internet technologies cannot be fully exploited due to a lack of knowledge, experiences and skills of such technologies.

The findings are consistent with the research outcomes of Ueasangkomsate (2015) and UNCTAD (2013) indicating that EC implementation of SMEs is still not efficient and not convenient for marketplace. Most of them use the internet more to send mails, transfer files or gather information and less to develop services, processes, business automation and internal processing of business information and knowledge (Awa et al, 2015, p 144).

Building Customer relationship.

The findings indicated that a few of SMEs implement this mode to build strong customer relationship through customer relationship management (CRM) program. CRM is a useful tool to provide related information to support companies in order to resolve support problems, encourage potential leads and deliver a unique brand experience (Richardson, 2017). One respondent stated that:

CRM facilitates greater business efficiency in the areas relating to more responsive customer service, better use of salespeople's time, closer measurement of product development cycles and marketing campaigns.

Also, another respondent mentioned that:

Senior executives can make better decisions with the use of automated reporting and dashboards. The companies believe that customer satisfaction is the most important factor to stay competitive.

The results support the argument of Čočkalo et al (2013, p. 219) stating that CRM utilization can improve organization's profits and become more competitive by satisfying the client's need and wants. However, many respondents have not adopted CRM system in their organization due to various reasons, including the costs of hardware and software and resources limitations (e.g. finance, staffs and time). One respondent mentioned that:

CRM system is not adopted because of insufficient resources to acquire the CRM system and lack of knowledge, skills and expertise to implement the system.

Another respondents stated that:

We have less understanding about CRM technologies and do not know how this approach should be cost-effectively employed.

The findings support the past research results indicating that SMEs do not adopt CRM in their business because massive investment is required in maintaining customer database (Čočkalo et al, 2013, p. 218).

Process Improvement. The findings showed that SMEs utilize website, E-SCM and CRM in order to improve their

business operations. According to website, it is an effective tool for reaching a wider audience, particularly unreachable customers. One respondent stated that:

Website helps us easily expand business and allow for sales process automation and for sales to be converted at a much higher rate than traditional sales systems.

In addition, the implementation of E-SCM can make the companies more efficient and effective. The respondents indicated that E-SCM provides them a wide variety of capabilities, including (1) greater integration throughout the supply chain, (2) lower inventory level, (3) lower operational redundancy, (4) higher accurate shipment tracking to their customers, (5) better production planning and scheduling, (6) faster response to problems or errors, (7) better management of information through decision-support systems and (8) higher levels of quality and customer satisfaction.

Furthermore, the utilization of CRM has dramatically enhanced sales method. Two respondents mentioned that:

We have a better process of handling leads and nurturing those into meaningful opportunities and providing insight into the life cycle of our future and existing customers. Best of all, it reduces the time of manual procedures and a lot of calls and e-mails between departments.

Therefore, the findings support the previous studies results indicating that the alignment of website, E-SCM and CRM with business processes will help companies to increase their performance and competitive advantage such as customer loyalty and productivity improvement (Barutcu and Tunca, 2012; Tan and Trang, 2017).

The factors influencing EC adoption

The Interviewees were asked to explain what and how critical factors influencing their decisions to adopt EC applications in their business operations. The interview findings showed that technological, organizational, and environmental contexts impact EC adoption in SMEs.

Technological context

Perceived Benefits. According to the results, SMEs adopt EC because they believe that there are potential opportunities and advantages of EC for their businesses. The respondents provided a wide range of advantages of EC adoption, including lowering costs, increasing business and market knowledge, improving business processes, extending new markets, strengthening customer relationship, developing new products and services and increasing sales. Moreover, the respondents noted that EC allows them to compensate their traditional limitations such as resource constraints and size

disadvantages as it increases opportunities to new market entry, particularly international markets, and expands production capacity without increasing costs and manpower. One respondent stated that:

EC help to expand markets both locally and internationally – with small capital investment.

Another respondents said that:

An online presence requires a full computerization of operational processes – such as check-out, billing and payment – thus reducing the number of employees required to manage the business. Therefore, we can increase productivity and reduce costs.

Therefore, this paper's findings support the previous studies' outcomes (e.g. Al-Bakri and Katsioloudes 2015; Ghobakhloo et al, 2011; Hajli and Sims, 2014; Ifinedo, 2011) demonstrating that the firms that are aware and understand of the benefits of EC tend to accept new technologies in their business operations.

Government Policies and Supports. The findings revealed that government policies and supports are significant motivators of EC technologies adoption in SMEs. Importantly, the respondents pointed out that the governmental supports help eliminate the barriers to EC adoption in terms of resources shortage and insufficient IS knowledge and skills. Two respondents stated that:

The government's support programs – such as funding, training courses and

workshops relating to online business for SMEs (i.e., OSMEP, DIP etc.) inspire them to recognize the advantages of EC (i.e., productivity and competitiveness improvement) and result in accepting innovation technologies in their business operations.

Furthermore, the respondents suggested that the government's policies, subsidies and support infrastructures will develop the e-readiness (e.g. quality of ICT infrastructure, reasonable prices of software for SMEs etc.) in the country. The results corroborate the research findings of OECD (2017, p. 12) stating that "the development of an efficient ICT infrastructure, as well as enhanced interoperability and standards, are also increasingly important to access global markets, as they facilitate information exchange and communication as well as participation in EC platforms". One respondent mentioned that:

The government should develop software, particular for SMEs because software used by large companies are too expensive for SMEs to afford.

Therefore, the findings support the prior studies' outcomes (e.g. Awa et al, 2015; Chatzoglou and Chatzoudes, 2016; Durbhakula and Kim's study, 2011; Li and Xie, 2012) demonstrating that the government's policies and supports tend to motivate SMEs' intent and interest in accepting and implement EC in their business operations.

Organizational context

Organizational IS competence. The findings discovered that managers' knowledge and awareness of EC systems as well as the IT skills of company's members impact the adoption of EC systems. However, the respondents stated that they still cannot fully exploit the advantages of internet technologies due to a lack of knowledge, experiences and skills of such technologies. One respondent said that:

We are reluctant to adopt EC technology due to our limited financial resources and lack of technical know-how.

On the other hand, one respondent stated that:

Since we lack sufficient knowledge of IT and e-business, so we decide to use the service of leading online marketplace such as Lazada in order to overcome our limitations.

Therefore, the results support the past studies' findings (e.g. Al-Bakri and Katsioloudes, 2015; Ghobakhloo et al, 2011; Hajli and Sims, 2014; Ifinedo, 2011) signifying that SMEs implement EC systems successfully where their executives and employees have sufficient IS skills and expertise.

Management commitment and Support.

The findings specified that management commitment and support can promote the innovation technologies acceptance in SMEs. Two respondents stated that:

Top managers motivate other organizational members to accept Internet technologies when they

recognize the significant of EC technologies for their business operation improvement and competitive advantage achievement.

Moreover, three respondents mentioned that:

Top managers help to remove barriers relating to a lack of sufficient IS skills and expertise of organizational members by sending them to certain training courses and workshops (e.g. online content creation, social media marketing, online advertising and promotion, website development).

Therefore, the results support the previous researches' outcomes (e.g. Chatzoglou and Chatzoudes, 2016; Ghobakhloo et al, 2011; Ifinedo, 2011) suggesting that management commitment and support stimulate SMEs to adopt and implement EC systems.

Environmental context

Competitive Pressure. The findings indicated that SMEs use EC strategies in order to stay competitive and innovative as an essential for their survival and business growth. All respondents pointed out that EC is a source for organizational competitive advantage for today's business environment. One respondent said that:

EC is employed as a new innovation strategy to offset resource limitations (i.e., financial and human resources) and size disadvantages (i.e., customer reach and production costs) – as it assists in

lowering costs and expanding geographical reach.

Likewise, another respondent mentioned that:

The use of Facebook is an effective marketing channel for reaching out new customers and new demographics (e.g. Laos) and exposing the business to new partners (e.g. increased numbers of distributors).

Therefore, the results corroborate the past researches' findings (e.g. Al-Bakri and Katsioloudes, 2015; Chatzoglou and Chatzoudes, 2016; Ifinedo, 2011; Ghobakhloo et al, 2011) suggesting that an environment of fierce competitive challenge tends to influence EC adoption and implementation in SMEs.

Financial Resources Availability. The findings showed that SMEs with better financial assets tend to accept EC more than counterparts with less resources. Two respondents mentioned that:

We adopt EC because we are able to invest in new technologies and pay for EC implementation expenses and ongoing expenses (e.g. communications charges and usage fees). We believe that investing in EC platform is important for all business in order to enhance competitiveness.

Conversely, one respondent stated that:

Although we recognize the benefits of EC, engaging in the full functionality of EC may increase overall costs. We have to make expenditures on technology

devices, communications support, and product or service support (e.g. delivery, on-line payment and certified security). Therefore, we are reluctant to adopt such technology due to our limited financial resources and lack of technical know-how.

Therefore, the results support the past studies' outcomes (e.g. Al-Bakri and Katsioloudes, 2015; Ifinedo, 2011; Li et al, 2010; Yoshino and Taghizadeh-Hesary, 2016) suggesting that the availabilities of financial resources and support tend to drive EC adoption in SMEs.

The consequences of EC adoption on firm performance

In this section, the interviewees were asked to describe whether and/or how EC adoption impact on their firm performance. The findings revealed that SMEs that adopt EC in response to environmental challenges can enhance their business performance. The respondents indicated that EC helps the companies to increase productivity, improve higher levels of quality, and enhance customer satisfaction, thereby increasing sales and profits. One respondent stated that:

Line application is used for two-way communication channel within the company. It provides an open channel for employee feedback, inspiring them to share ideas and suggestions for improving productivity within the

company. By doing so, we provide mobile Internet devices (i.e. smartphones) to our employees as a way to be connected between different departments in a company, improve productivity, and enhance customer services and may result in increased sales and profits.

In addition, the respondents suggested that the EC is an effective tool in generating leads and increasing sales by satisfying the customer's needs and wants. One respondent mentioned that:

The utilization of EC can boost sales by 10 – 20% from both existing and new customers. It is an effective channel to extending market reach, delivering a unique brand experience and increasing customer satisfaction.

Likewise, another respondent stated that:

The use of EC improve our sales (e.g. increased the order size and the number of online customers). The Internet technology improve inventory management and customer service offerings by providing another platform on which customers can reach out with complaints and questions – thereby lowering costs and increasing customer satisfaction and profits.

Another respondent mentioned that:

The use of Facebook and the service of leading food delivery application such as Lineman can increase sales by 10%. The technologies allow us to learn about our customers' needs, wants, and habits, increase traffic to our site and boost sales.

Therefore, the results support the past studies' outcomes (e.g. Abebe, 2014; Yasin et al, 2014) suggesting that EC adoption significantly improves firm performance, particularly annual sales growth rate.

Conclusions

This paper aims to investigate the important determinants of EC adoption and its effects on firm performance in SMEs. Specifically, three main factors driving SMEs' endeavors in EC acceptance are highlighted, including organizational, environmental, and technological elements. The framework developed by this paper offers a conceptual foundation for further empirical study. It also provides insights into what significant factors motivating SMEs' EC adoption and how such EC adoption improves business performance. According to the determinants of EC adoption, all factors comprising organizational, environmental, and technological components significantly influence SMEs to adopt EC systems. Moreover, the adoption of EC applications tend to improve firm performance, particularly sales growth rate. Furthermore, this paper contributes to some important recommendations, both for practitioners and for future research in this subject of concerns.

Implications

Implications for research

This papers offers some theoretical contributions. First, the conceptual framework in this paper is built upon the previous studies but is different in an integrative approach. This paper intends to address factors influencing the adoption of EC within SMEs. Accordingly, it supports the suitability of the TOE framework as a practical model for explaining the adoption of EC in SMEs in developing countries. Second, the "adoption" proposed in this paper is different from prior studies that incline to operationalize such constructs with a single item of "use" (usage) or intention to use. The employment of such single item may mislead the reality and has been criticized for limiting understandings (Ifinedo, 2011). Third, this paper not only proposes the determinant factors of EC adoption but also its impacts on firm performance in the single framework. Consequently, this would gain a holistic knowledge of the subject under investigation. Therefore, this paper provides valuable insights into the literature with its viewpoints of the EC adoption topic in the SME context, which practitioners in similar settings may find useful.

Implications for practice

This paper provides some recommendations for government

agencies and SMEs. Government agencies play a key role in supporting EC adoption in SMEs, especially in developing countries like Thailand. The widespread use of EC is a necessity for survival and growth of SMEs. Accordingly, the government agencies need to promote the attitude and innovativeness of owners/managers through improving their understanding and perception toward EC adoption (e.g. training programs, workshops and coaching). The higher level of awareness towards EC benefits of CEOs, the more likely their receptiveness of EC usages will be enhanced. Moreover, since EC adoption cost is a major barrier for EC adoption within SMEs, financial incentives and supports provided by the government for EC development would significantly improve e-readiness of SMEs. SMEs with sufficient financial resources would consider to invest in the adoption of EC applications as a feasible project to enhance their business operations. Accordingly, this paper suggests that policy makers play a vital role in promoting EC successfully among SMEs in developing countries, particularly Thailand. Therefore, EC-friendly policies should be developed and implemented to remove obstacles concerning financial, legal, and physical infrastructures for the improvement of EC in businesses across the whole country.

In order to survive and stay competitive in the highly changeable business environment, SMEs' owners and

managers need to understand and have positive attitudes towards the benefits of EC adoption. The deployment of EC technologies, particularly interactive website and social media platforms (i.e., Facebook, Line, and YouTube) can help SMEs to compensate their resource constraints in order to reduce costs, develop markets, improve business processes and customer satisfaction, and enhance communications and coordination both internally and externally. However, SMEs should determine which online platform is right for the targeted audiences, and consider which one will help them meet their marketing purposes. For example, for companies whose target customer is aged 25 – 34 years old, the most effective use may be Facebook and website in order to have a presence, provide contact information, and use it strictly for their robust advertising campaigns. They can learn about the needs, wants, and habits of their audience and customers and thereby increasing traffic to their site and boosting sales. In addition, top executives and business owners need to utilize the full benefits of EC adoption in order to improve services, processes, and business automation. Furthermore, the managers should commit and support necessary resources to adopt and use EC applications and must invest in activities that develop their technological readiness, especially knowledge and skills of IT and e-business for managers and organizational members in order to build a compatible business structure

prompt to accept and use innovative IT systems.

Limitations and future research

This paper has some limitations. First, this paper aims to propose a theoretical model of the determinants of EC adoption and its effects on firm performance and empirically test the model. The theoretical model proposed in this paper can be further studied in Thailand and in other developing countries with comparable analyses to deepen knowledge in this subject of study (Ifinedo, 2011). Second, this paper focuses only on the enabler factors of EC adoption and those enablers may not guarantee the initiate of EC adoption within SMEs. The barriers to the use of EC in SMEs is needed for the future research in order to ensure content validity (Hajli and Sims, 2014). Third, the theoretical framework of this paper

emphasizes only on SMEs, thus it could be used to study the effects of similar factors in larger companies in Thailand. Moreover, future studies employing meta-analytic methods could inspect the enablers and inhibitors of EC adoption in SMEs in comparable measures of the developed countries (Ifinedo, 2011). Finally, future studies should examine whether other factors (e.g. perceived compatibility, consumer readiness, support from IS vendor, information intensity, supplier/customer pressure, adoption cost, etc.) impact EC adoption in SMEs.

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