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AND COMPETITIVE ADVANTAGES**

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## Abstract

This paper originally contributes to the current literature by proposing a conceptual model which integrates modified and extended entrepreneurial marketing behaviors to enhance firms' competitive advantages with the disruptive innovation processes. Four specific entrepreneurial marketing behaviors; rapid feedback to uncertain events in innovative processes, creating focused efforts to achieve goals, cross-disciplinary-team practices, and continuous market engagement establishment, are proposed to enhance the disruptive innovation and then result in the firm competitive advantages. Moderators; size of firm, radical innovation level, employee resistance level, degree of innovativeness, degree of proactiveness, degree of risk taking, and level of limited affordable loss, susceptibly affecting on the relationships between the integration of disruptive innovation process with entrepreneurial marketing behaviors and competitive advantages are proposed in the model. Specific indicators of competitive advantage are also identified. Academic and practitioner implication, and future research recommendations are provided.

**Keywords:** Disruptive innovation, Entrepreneurial marketing, Competitive advantage

## 1. Introduction

Currently and considerably, disruptive innovation has been concerned and focused by studies of both scholar and practitioner (e.g. Christensen et al., 2015; Koury, 2015). As disruptive innovation can provide beneficial effects in terms of firms' competitive advantages and performance (Blauth et al., 2014; Engel, 2011; Hacklin et al., 2005; Minoja et al., 2010), there have been studies investigating various dimensions related to this becoming jargon for proactive organizations. For instance, Carayannopoulos (2009) studies what and how specific conditions leverage newness and smallness of firms for commercializing disruptive product innovation. Freeman and Engel (2007) examine how startup entrepreneurial firms and mature corporates can effectively and efficiently execute innovation. The authors find that entrepreneurial behaviors especially for decision making and operations can utilize the innovation opportunity very successfully, while the mature corporates implicitly enhance innovation processes by combining the entrepreneurial behaviors.

The disruptive innovation, initiated in 1995, is defined as a breakthrough technology changing the performance metrics along which the firm competes (Pinkse et al., 2014). In particular, the disruptive innovation renders the attributes satisfying the current needs of mainstream markets. Explicitly, a startup firm particularly as a small or medium one can obtain advantages from the disruptive innovation while an established firm gets disadvantages. However, not every firm conducting the disruptive innovation can succeed. Not every successful firm does apply the disruptive innovation (Christensen et al., 2015). Mallick et al. (2013) support this aforementioned statement by providing evidence that a disruptive product innovation can provide a negative performance outcome.

Hills et al. (2008) define entrepreneurial marketing firm as the interfacing between entrepreneurship and marketing. With respect to this developed form of organization, the specific focus of studies in the entrepreneurial marketing area composes of small and medium marketing, growth oriented marketing, and high growth intentions. Thoumrungroje and Racela (2013) point out the failure of an entrepreneurial firm in its new product development processes. Thus, there is an inspiration to study what behaviors or characteristics of the entrepreneurial marketing firm are suitable for innovation processes. Based on the Stevensen and Jarillo's (1990) definition of entrepreneurship, it can be inferred that an established firm can apply the entrepreneurial marketing in the firm's business management in terms of opportunity persuasion. Moreover, Miles and Darroach (2006) point out clearly that large firms can improve their radical innovation by applying entrepreneurial marketing. Nevertheless, little research has integrated the disruptive innovation theory with entrepreneurial marketing approaches by particular which both small-and-medium and large organizations can apply (Matsuno et al., 2014). Furthermore, competitive advantage that has been used as the measurement of the disruptive innovation process's outcome still has been in an inconclusive agreement. For example, Mallick et al. (2013) use firms' market and financial performances to represent the firms' competitive advantage. However, Miles and Darroch (2006) propose the competitive position, resource exploitation, and risk and opportunity management capability as competitive advantage. That is, this article intends to identify the most appropriate indicators for competitive advantage under its level of relevancy with disruptive innovation process and entrepreneurial marketing behavior or characteristics for the future empirical research.

Before stating the research gaps and study intentions, the author would provide an information with respect to the selective results of qualitative exploratory survey conducted by the author in the early of June 2016. The qualitative exploratory survey occupies an in-depth interview as the research tool collecting opinions and perceptions of thirteen executive managements relevant to the issues of innovation, disruptive innovation, entrepreneurship, entrepreneurial marketing, and key success factors for disruptive innovation implementation incorporated with the entrepreneurial marketing behaviors. The in-depth interview survey follows the Miles and Darroch's (2006) guideline for qualitative analysis techniques. In other words, the initial step uses open-ended questions followed by probing questions through interview and discussions. The results of exploratory survey, briefly shown in the Appendix from Table 1. to Table 4., provide preliminary understandings regarding the inferior knowledge and different perceptions of the firms' executives toward the key aspects, disruptive innovation and entrepreneurial marketing. The interview results confirm the importance of this study because of the presented failure propensity of firms in implementing the disruptive innovation process incorporated with the entrepreneurial marketing characteristics.

Thirteen respondents have age ranges from 29 to 61 years old (Table 1.). About two-third respondents are male and almost all take the high executive positions, e.g. CEO, Executive Vice President, Managing Director, Director, etc. However their company size is considerably different ranged from the revenue per year at 1.2 million baht to 500,000 million baht and from the net profit per year at 500,000 baht to 25,000 million baht. Therefore, the position titles may not present the level of organizationally controlling position compared to the size of company. Moreover, the respondents' business type and time length in position are considerably different. That is, these respondents can be appropriate sample for the exploratory survey in terms of a variety of their profiles covering small and large firms, different business contexts, and respondents' experience, respectively.

Anonymous presentations show that there is no much difference for the knowledge relevant to the general innovation (Table 2.). However, respondent M presents a unique meaning of innovation which is mixed up with the disruptive innovation definition. For the respondents' knowledge about disruptive innovation, the results display a variety of their understanding. Mostly, the respondents perceive the disruptive innovation as the general innovation or incremental innovation (e.g. respondents A, B, C, L and M). Only respondents D and E are likely to provide the meaning of disruptive innovation consistent with the Christensen's et al. (2015) definition for which the disruptive innovation supports small or medium firms to conduct a radical innovation forcing the incremental innovation to be inferior. The small or medium firms can provide the markets by innovative products or services with lower prices for upgrading to challenge the mainstream markets. Interestingly, respondent D is a representative of large firm while the respondent E is from a small firm. Therefore, it can be concluded that the disruptive innovation should be applied for both small and large firms.

In particular, as the author presents the definition of disruptive innovation to all respondents and asks the suitability of this concept to their firm. All of them, except for the respondent F, totally agree that the disruptive innovation fits to their firm and additionally they have tried to apply this innovation with the firm (e.g. respondents A, E and M). This conclusion supports the argument that it is not necessary only for small or medium firms enjoying the outcome of disruptive innovation. Large firms, represented by respondents A, B, C, D and M, are willing to apply this radical or disruptive innovation with their firm too.

According to the knowledge relevant to entrepreneurship, respondents A, D, E, I and K are likely to provide meanings close to the entrepreneurship's definition (Table 3.) compared to the definition in the literature review section. However, respondents B, C, H and L are likely to explain the meaning of entrepreneurship by the definition of entrepreneurial marketing. For the rests, respondents F, G, J and M provide the inconclusive meanings, being difficult for specific classification. Surprisingly, when the author tests the respondents' understanding with respect to the entrepreneurial marketing, there is only one case (respondent A) providing a close meaning of entrepreneurial marketing compared to the details in the literature review section. Even though, the respondent A presents his understanding that is consistent with the literature, his explanation shows only two dimensions; proactiveness and risk taking as the firms pursue entrepreneurial marketing activities rather than three important characteristics; innovativeness, proactiveness, and risk taking. Respondents C, J and K display their knowledge by catching up key words, 'marketing' that is reflected by pursuing marketing and 'entrepreneurial orientation' that is reflected by owner or entrepreneur. However, their explanation has no clear in terms of the construct's item specification. Moreover, the respondents E, G and L point out that entrepreneurial marketing is likely to focus on only firms' profit rather than customers' benefits. Based on these results, it can be interpreted that they misunderstand the concept of entrepreneurial marketing and especially of the traditional marketing one. Respondents B, D, F, H, I and M present their understanding as the traditional marketing concept. Therefore, it can be suspected that both small and large firms participating in this exploratory survey can hardly integrate entrepreneurial marketing to disruptive innovation successfully when they misunderstand or have insufficient knowledge.

With respect to perceived key characteristics of entrepreneurial marketing, only respondents A, D and K are likely to show appropriate explanations of these terms (Table 3.). All respondents provide important key success factors for implementing the disruptive innovation such as having innovativeness, looking for new opportunity, risk taking, resource

management, policy commitment, and communication capability. Based on this information, the author would analytically integrated these factors with the literature reviews to provide a conceptual model that specifies the dimensions of entrepreneurial behaviors for enhancing disruptive innovation implementation.

Based on the characteristics of entrepreneurially oriented firms, Table 4. shows that all respondents have partial agreements with the relevant dimensions of these characteristics; innovativeness, proactiveness, and risk taking. In particular, the respondents discuss in specific aspects, such as opening or promoting people in R&D to be innovative reflecting the innovativeness perspective (e.g. respondents A, H and K), looking for opportunity reflecting the proactiveness perspective (e.g. respondents A, G, H and M), and accepting risks or having readiness for risks reflecting the risk taking perspective (e.g. respondents B, D, G, L and M).

As the results of qualitative exploratory survey, the aforementioned information displays inferior knowledge and some misunderstandings of firms for disruptive innovation and entrepreneurial marketing represented by the respondents' opinions and perceptions. Again, there is little research investigating a direct integration of entrepreneurial marketing to the disruptive innovation (Matsuno et al., 2014). Thus, this article aims to fill the gaps by providing a conceptual model identifying relevant and important characteristics of the entrepreneurial marketing that the disruptive innovation can integrate with to enhance firms' competitive advantages and proposing propositions for future empirical research. As a result, the conceptualized model and developed propositions in this article can contribute to the previous literatures by enhancing understandings how the application and/or integration of the disruptive innovation with the entrepreneurial marketing can be successful for both small-and-medium firms and large firms.

A structure of this article can be displayed as follows. The next section will provide an exploratory review of selective literatures to derive propositions and develop a conceptual model. In particular, the crucial aspects, disruptive innovation, entrepreneurial marketing, and competitive advantage will be discussed in details. Derivations of key propositions relevant to the integration of disruptive innovation with entrepreneurial marketing are shown. Then, theoretical and practitioner implications will be discussed. Further research directions also are displayed. Important aspects are concluded in the last section.

## 2. Literature review

The exploratory selective literature reviews on disruptive innovation, entrepreneurial marketing, and competitive advantage are provided to develop an integrated conceptualizing model and propositions for future research.

### 2.1 Disruptive Innovation

Since its initial development in 1995, the disruptive innovation theory has been applied in real business environments and studied by various academics. However, Christensen et al. (2015) point out that there have been misunderstanding and misleading for both business applications and academic studies. In particular, the disruptive innovation originally drives companies without large resources to serve low-end markets that established company overlooks because of the markets' low profit margins. Additionally, Pinkse et al. (2014) cite the definition of disruptive innovation that it is a technology changing the competition bases through a change of performance metrics along which firm competes. As a result, the disruptive innovation disappoints attributes that gratify the current needs of mainstream markets. This traditional definition seems to suggest that the disruptive



innovation only fits to a small or medium company which has inadequate resources. Hacklin et al. (2005) also support this statement by expressing that incumbent firms generally fail to get advantages from disruptive innovation while new market entrants or startup firms, which generally are small and medium company, obtain benefits from their innovation application. Yet, Engel (2011) argues that incumbent firms can successfully adapt the disruptive innovation to their competitive market management and can get competitive advantages. That is, it can be inferred that there would be a condition under which the disruptive innovation can also be conducted by large firms rather than only small and medium firms can do. This inference is consistent with the study of Miles and Darroch (2006).

In addition, Christensen et al. (2015) convinced that the disruptive innovation is appropriate for inferior companies focusing on the low-end and newly created markets rather than the existing growth markets. In other words, the disruptive innovation intends to drive the price down at least in the beginning stage of theory application into practice. However, general firms have improved and grown up continuously by higher standards of products and services, especially for newly created markets. Likewise in the low-end markets, firms would increase value delivered to customers for being in a better market position. Then, these firms can achieve serving the mainstream market and be able to challenge the market leader. Thus, the disruptive innovation theory should be applicable to large firms, at least for the ones that expand their new markets.

Koury (2015) provides an interesting issue of disruptive innovation theory that most firms will be forced by disruptive market conditions. This provision is consistent with Carayannopoulos' s (2009) warning aspect that the large or strong incumbents can be challenged by small and medium firms as the latter's disruptive innovation initiatives. In other words, firms ought to proactively kick off their disruptive innovation by themselves rather than reactively be forced by markets. Important examples of disruptive market forces, used by Koury (2015) similar to Christensen's et al. (2015) and Engel's (2011), are Apple and Uber which changed music and taxi industries respectively. That is, both small-and-medium and large firms need to pay attention to the disruptive innovation aspect and search an appropriate approach for the adaptation of this concept to their firms' practices. Otherwise, these firms perhaps face survival crisis and/or competitive disadvantages.

Disruptive innovation has important characteristics, incremental to radical changes, by which the regular practices of firms are generally affected in terms of their strategic and operational changes. Carayannopoulos (2009) points out that an incremental innovation requires a little change with respect to a firm's existing knowledge and established designs. Accordingly, the incremental changes augment and strengthen the existing knowledge of firms that link to conventional customers. There may consequently be an improvement of markets and business performance as regular incumbents have conducted their strategic and operational decisions because of current profitability (Christensen et al., 2015). However, the incremental innovation hardly drives a uniqueness for the firm, the firm's specific product or corporate brands. Therefore, a small and medium firm that intends to steer upmarket position by its uniqueness is unlikely to apply the incremental innovation.

Oppositely, a radical innovation is a threateningly forcing change for existing knowledge and market equities (Thoumrungroje & Racela, 2013). Large and strong incumbent firms generally overlook this disruptive innovation type since the existing high profit margins of current markets are preferable. In addition, an adaptation of the radical innovation perhaps increases firms' costs. However, the small and medium firms that intend to develop their market position in mainstream markets focus on the radical innovation.

Therefore, there has been a risk for large firms or strong incumbents if they have not searched an approach to adapt the radical disruptive innovation. Indeed, Hacklin et al. (2005) identify obviously that the incremental innovation is not a part of the disruptive innovation. Consequently, to achieve the major objective of this article in terms of the integration of disruptive innovation with the firm, the author proposes the radical innovation as the focused approach of disruptive innovation.

Hacklin et al. (2005) also discuss how to succeed in conducting the disruptive innovation. It is agreed that firms should be concerned a dynamic condition of innovation, indeed for both disruptive and sustaining innovations. The crucial conclusion remarked by the authors is that there is a need of cumulative and evolutionary practices of core capabilities in accordance with a market driven perspective. In addition, an integration of goal oriented management regarding disruptive innovation with corporate strategy is very important. In other words, if any firm would like to succeed by the disruptive innovation adaptation, should the firm have strategic and operational approaches concerning market- and goal-driven management practices?

According to the above questioning conclusion, there is a requirement to investigate what characteristics and/or factors that both small-and-medium and large firms should have for executing the disruptive innovation to achieve competitive advantages. Blauth et al. (2014) discussed a very useful relevant aspect in terms of entrepreneurial decision making which the decision is not confined by a startup firm only. The important characteristic of this decision making is that 'opportunity is created rather than observed', for which it is inferred that if a firm can create a change of chances regarding market- and goal-driven management practice, then the firm has a high tendency to achieve competitive advantage through disruptive innovation application.

However, it is definitely normal that there is resistance from relevant people in organizations (Koury, 2015), especially for large incumbents in which both executives and line employees have settled up their performances, working environments, and compensation. Particularly, the radical innovation which is disruptive requires an organization's strategic and operational adjustments, which could be costly and risky. Thus, it is not unusual to have resistance in the organization. In other words, there would be a necessity of investigation of firm specific behaviors and characteristic suitable for disruptive innovation especially for overcoming the resistance. Specifically for this paper, the author intends to study what the firm's entrepreneurial marketing behaviors and/or characteristics are appropriate to enhance the disruptive innovation applications.

## 2.2 Entrepreneurial Marketing

Entrepreneur and/ or entrepreneurship has been very familiar to Thai and Thai organizations, and also Asian organizations, since the gigantic crisis in Asia started from Thailand in 1997, namely 'Tom Yum Goong' crisis. Many established companies and/or large firms bankrupted during the crisis. Subsequently, there were many executives, managers, and operational employees who were fired, and then these unemployed people made their own startup company as small and medium firms. Thus, initially, the entrepreneur generally refers to the startup or small and medium firms. However, Stevensen and Jarillo (1990, p.23) define entrepreneurship as "a process by which individuals-either on their own or inside organizations-pursue opportunities without regard to the resources they currently control". It can be implied that any firm, the small and medium or established ones, can have entrepreneurship as long as they have entrepreneurial behaviors or characteristics and pursue



opportunities regardless the existing available resources. In other words, the keywords for entrepreneurship are not confined for the startup or small and medium firms but the opportunity oriented ones. This inference consequently supports the aim of this paper's contribution to apply the entrepreneurial marketing for established firms to drive the disruptive innovation effectively and efficiently.

Hills and Hultman (2013) exclaim that entrepreneurial marketing, particularly in the area interfacing between entrepreneurship and marketing, still has been an important and interesting aspect for investigation and comprehension acquisition to achieve fulfil knowledge and superior solutions for academics and market practitioners respectively. In other words, there still have been research gaps for theoretical development and management improvement. Thoumrungroje and Racela (2013), for instance, discuss the possible failure of an entrepreneurial firm which can be generally exposed in new product development when the firm lacks a customer or market-driven orientation. That is, the entrepreneurial marketing can enhance the competitive advantage of firm in terms of innovation executions. Therefore, academics and practitioners should focus on studying important behaviors or characteristics that entrepreneurial marketing firms should have or develop for effective and efficient business-goal achievement especially for the innovation formation and execution in current competitive market environment.

Initially, research on entrepreneurial marketing specifically focuses on at least three important areas: small and medium marketing, growth oriented marketing, and high growth intentions (Hills et al., 2008). In particular, the small and medium marketing is generally controlled by owner or manager concerning customers as a central emphasis. For example, Sam Walton, the founder of Wal-Mart, established and had managed his retailing business by keeping close contacts with the Wal-Mart's customers and low price value under his controlling manner (Slater, 2003). Walton had visited his customers as many as he could to assure that he understood his customers' needs and could assort the goods or services to fit their needs. However, entrepreneurial marketing can be implicitly formulated and executed in extremely competitive markets by dynamic high growth entrepreneurs in a startup firm or small-and-medium firm or even established large firm (Hills & Hultman, 2013). As in the Wal-Mart case, John Walton, a son of Sam Walton, who became the executive of Wal-Mart after Sam Walton passed away, has managed and built the company's remarkable success under the remained philosophies of entrepreneurial marketing that Sam Walton established. In specific, the Walton family announces deliberately that they have intentionally involved with the company and insisted that the sustained Sam Walton's way for Wal-Mart must be endlessly preserved (Slater, 2003). Noticeably, when John Walton has driven the Wal-Mart's strategic direction and operational practices, the firm is not the small-and-medium one anymore. That is, it can be inferred that Wal-Mart, which was a startup entrepreneurial company in the particular time and then became the established firm, has been successful under the entrepreneurial marketing approach until now. Consequently, this article eligibly proposes the conceptual model of integrating disruptive innovation with the entrepreneurial marketing which can be applied to both small-and-medium and large firms.

According to the recent study of Blauth et al. (2014), it is considerably clear that entrepreneurship can be a characteristic which is possibly owned by employees rather than only the owner. The authors found that an entrepreneurial decision making practice could enhance employees' creativity in new product development. In other words, the entrepreneurship particularly in marketing decision making or entrepreneurial marketing is likely to be a suitable manner for executing innovation successfully. An important question is

what the crucial characteristics of entrepreneurial marketing are as key success factors in the specific innovation formation and execution processes, especially for the disruptive innovation.

## 2.3 Competitive Advantage

The statement detailed as "..., *the ability to sustain innovation over time becomes instrumental for firms seeking to create and maintain a competitive advantage*" (Miles & Darroch, 2006, p. 486) implies that competitive advantage is an asset or equity searched by firms. Nevertheless, there are different meanings of the competitive advantage. For instance, Minoja et al. (2010) provide the definition of competitive advantage as the condition that firms have a higher level of economic rents compared to average competitors. In other words, competitive advantage is the situation that firms have the extraordinary amount of outputs when the same amount of input resources is consumed by regular competitors. According to the Minoja's et al. (2010) definition, the competitive advantage is accounted as successful resource exploitation which is consistent with the one of four dimensions proposed by Shane and Venkataraman (2000). Meanwhile, de Zubieli et al. (2014) are similarly concerned a higher rate of economic rent representing the competitive advantage of firms, in specific the authors point out that market position is the measurement of economic rent.

Shane and Venkataraman (2000) identifies competitive advantage, particularly related to the concept of entrepreneurial oriented firms, into four dimensions; firms' entrepreneurial opportunity recognition and creation, entrepreneurial opportunity evaluation, successful resource exploitation, and superior market - position creation. Miles and Darroch (2006) propose the definition of competitive advantage mostly relevant to entrepreneurial marketing applications by considering three principles, such as strengthen competitive position based on innovation and customer value creation, effective and efficient resource exploitation, and risk and opportunity management capability. Although the Miles and Darroch's (2006) definition does not clearly take the disruptive innovation into account, the scope of this meaning is related to two important aspects, entrepreneurial marketing and innovation. Mallick et al. (2013) link competitive advantage to firm performance as the results of continuous product development by proposing that these two aspects are the same. In particular, the authors measure the competitive advantage through market share, sales growth, earning growth, and profit margin. Therefore, to achieve the current article's objective focusing on the development of conceptual model and proposition provision for disruptive innovation integrated with entrepreneurial marketing, this study integrates the aforementioned definitions and defines the competitive advantage as firms' market position, resource exploitation performance, risk-and-opportunity management competence, market share, sales growth, earning growth, and profit margin.

## 2.4 Propositions

There is few research implicitly integrating disruptive innovation with entrepreneurial marketing to enhance firms' competitive advantages (e.g. Miles & Darroch, 2006). That is, there is a need to develop a conceptual model to be the framework for future academic and practitioner studies. To fill the research gaps, this article derives and proposes propositions and then a conceptual model as follows.

### 2.4.1 Rapid Feedback to Uncertain Events in Innovation Processes

Uncertainty is very normal in the new product development especially in disruptive innovation processes (Pinkse et al., 2014). In specific, the disruptive innovation in terms of the radical innovation regularly forces a firm to drive a new technological breakthrough and threaten existing markets (Thoumrungroje & Racela, 2013). Hacklin et al. (2005) point out

that the disruptive innovation is dynamic because the aims of entrepreneurial orientation are to catch up dynamic customer preferences across diverse market segments. Coomber (2014) postulates the lifestyle and behaviors of Atte Miettinen, founder of Pryte which helped smartphone users reasonably using mobile data and was acquired by Facebook earlier of 2014. As a disruptive entrepreneur who has had a disruptive creativity and implicitly taken high uncertainty, Miettinen has developed his five technology startup firms. In particular, the key success factor that Miettinen realizes is a profound understanding of the dynamics of markets. Miettinen's experiences show that there is a remarkable uncertainty in the processes of disruptive innovation and a need of specific entrepreneurial manners. Matsuno et al. (2014) and Thourmrunroje and Racela (2013) point out that for radical innovation the entrepreneurial orientated firms should have three important characteristics; innovativeness, proactiveness, and risk taking.

Thourmrunroje and Racela (2013) also provide important details for each of above characteristics of the entrepreneurially oriented firms as follows. Innovativeness refers to a firm's propensity to participate in novel idea, experimentation, and creative processes. Proactiveness represents a firm's market opportunities focuses and acquisitions which are generally executed through predictions and active actions on future customer requirements. Risk taking refers to a firm's readiness to commit important resources to opportunities having a chance of failure. With respect to the first dimension, innovativeness, it can be inferred that relevant persons in the disruptive innovation processes particularly employees incorporated with creativity must deal with uncertainty. In particular, the radical innovations require organization leader and/ or relevant employees to have creativity connected with the high level uncertainty (Blauth et al., 2014).

Engel (2011) discusses important characteristics coping with the uncertainty in the disruptive innovation processes. The disruptive innovation does not depend on technical breakthroughs, however, the creative business platform is very crucial to facilitate the effective innovation development and commercialization. The author specifies that rapid feedback is one of the important characteristics for entrepreneurially oriented firms to drive innovations. Considering the Sarasvathy's (2001) explanations regarding entrepreneurial decision making by an effectuation theory, it is found that opportunities challenging a firm are created rather than observed, which results in a link with creativity. Hills and Hultman (2013) also support the effectuation theory in explaining the characteristics of the entrepreneurial marketing firms. That is, the entrepreneurial decisions seem to be driven by prevailing individual creative skills. This creative characteristic is consistent with the innovativeness manner specified by Matsuno et al. (2014), and Thourmrunroje and Racela (2013). Hills and Hultman (2013) propose that based on the effectuate characteristic, the entrepreneurial marketing firms have tended to have behaviors as growth-oriented, opportunity-oriented, highly interactive, highly market immersed and customer value oriented. Therefore, for dealing with the uncertainty manners of disruptive innovations, the entrepreneurial marketing firms intend to follow available means from their creative decision making rather than goal orientation (Blauth et al., 2014). Specifically, when any means in the disruptive innovation processes is available, the entrepreneurial marketing firms intend to response quickly because the firms undervalue the forecasted facts as very uncertain and prefer their own creative skills over market-goal relationship analysis. With the rapid feedback or response to uncertain events as the available means in the innovation processes, firms do believe there will be an enhancement of their competitive advantage under the conditions of firms' entrepreneurial orientation; innovativeness, proactiveness, and risk taking (Engel 2011). Thus, this article can develop a proposition for further investigation as

*Proposition 1. Disruptive innovation enhances firms' competitive advantages, when the firms apply the entrepreneurial marketing behaviors in terms of rapid feedback to the uncertain events in innovation processes and under the firms' innovativeness, proactiveness, and risk taking situations.*

#### **2.4.2 Creating Focused Efforts to Achieve Goals**

As the risk-taking characteristics of entrepreneurial orientation discussed by Matsuno et al. (2014) and Thourmrunroje and Racela (2013), the uncertainty again is a regular manner in the disruptive innovation processes. In particular, for disruptive innovation processes, there are high possibilities of information shortage which perhaps would induce uncertainty (Blauth et al., 2014). Therefore, there is a difficulty to forecast the expected returns or possible losses. Similarly, the effectuation theory convinces that the entrepreneurial marketing should rely on a principle of affordable loss and an acceptance of unexpected innovation results. That is, entrepreneurial marketing firms hardly prepare an accurate prediction of future circumstances. Consequently, it is difficult or has less possibility to predict how much loss can happen when the disruptive innovation does not succeed. Entrepreneurial marketing firms should accept the loss that the firms can afford rather than attempt to calculate the exact loss and define the loss limitation. The set-up loss limitation perhaps confines the creativity and limits or kills the innovation performance in the highly competitive market. Hills and Hultman (2013) support the affordable loss principle by providing the entrepreneurial marketing firms' orientation. In particular, the authors convince that entrepreneurial marketing firms should accept an affordable loss to achieve goals as growth- and opportunity-oriented, and customer value oriented. Engel (2011) also agrees with the affordable loss principle as the entrepreneurial marketing firms' characteristics to enhance the disruptive innovation processes by initiating the idea of 'fail fast'. It is worth being failure in the early stage and acceptable to pay loss at this state rather than pay large amount of money later. However, instead of passively accepting the affordable loss, with the creativity skills of the entrepreneurial marketing, consistent with the proactiveness proposed by Matsuno et al. (2014), the entrepreneurial marketing firms should create particular efforts to achieve the firms' goal even if there is a given affordable loss in mind (Engel, 2011). Thus, this study proposes the proposition regarding the characteristics of the entrepreneurial marketing firms, creating focused efforts, within the conditions of affordable loss as

*Proposition 2. Disruptive innovation enhances firms' competitive advantages, when the firms apply the entrepreneurial marketing behaviors in terms of creating focused efforts to achieve goals under the affordable loss conditions.*

#### **2.4.3 Cross - Disciplinary-Team Practices**

With regard to the Saravathy's (2001) effectuation theory and the Blauth's et al. (2014) conclusions for the entrepreneurial decision making, it is found that the partnership concern is another important characteristic of entrepreneurial marketing firms. This partnership orientation refers to the attitude that firms have towards outsiders. As the outsiders are perceived as potential partners who can contribute to the disruptive innovation processes by sharing information, sharing knowledge, collaborating extended resources, and broadening the firm's expertise for mutual benefits (Blauth et al., 2014). However, Engel (2011) proposes that cross-disciplinary teams are very important for firms to innovate and change rapidly. Top cross-knowledge-and-experience teams can contribute to the disruptive innovation processes very well in terms of sharing knowledge and experiences by which the top teams can recognize what has gone in a wrong direction. Furthermore, the cross-disciplinary team can work together to drive actions very quickly as the team's members who



may generally be delegated from different functions. As a result, the entrepreneurial marketing firms having the cross-disciplinary team can practice responding to the uncertainty in the disruptive innovation effectively and efficiently. In particular, this article intends to extend the perspectives of the effectuation theory by including all relevant stakeholders, such as employees, into the cross-disciplinary team rather than limiting only the partnership concerns for outsiders. Based on this cross-disciplinary team building, the level of employee resistance should be reduced. With relatively more effective and efficient practices of the cross-disciplinary team, the disruptive innovation processes can be driven better. Thus, this paper proposes the proposition as

*Proposition 3. Disruptive innovation enhances firms' competitive advantages, when the firms apply the entrepreneurial marketing approaches in terms of cross-disciplinary-team practices under the employee resistance level.*

#### 2.4.4 Continuous Market Engagement Establishment

Generally, disruptive innovations are not developed by technological areas only. The entrepreneurial marketing firms manage a continuous market engagement process for keeping close contacts with customers. With these engagement activities, firms can have update information, recognize and anticipate product innovation performance matrices, create disruptions (Engel 2011). Miles and Darroch (2006) conclude under the aspect of 'customer intensity' that firms need to insight their current and future customers and have examined constantly whether current products still have been suitable for the customers. Furthermore, firms necessitate to investigate what customers' new needs must be satisfied and create new product - market - technology areas.

Indeed, the Wal-Mart case in the reign of Sam Walton shows the benefits of market engagement directly to the Wal-Mart's disruptive innovations' successfulness. Also, the Starbucks case has postulated the competitive advantage and performance from the market engagement particularly that the Starbucks can overcome skeptical messages from various media (Michelli, 2007). Furthermore, the Starbucks conducted the disruptive innovation along with the market engagement when the Starbucks was proposing itself into the market as a new and small firm. Until now, the Starbucks still has pursued the market engagement continuously to achieve its innovation performance and competitive advantage. Thus, this article proposes the proposition with respect to the entrepreneurial marketing characteristics enhancing the disruptive innovations, resulted in competitive advantage, through the continuous market engagement establishment as

*Proposition 4. Disruptive innovation enhances firms' competitive advantages, when the firms apply the entrepreneurial marketing approaches in terms of continuous market engagement establishment.*

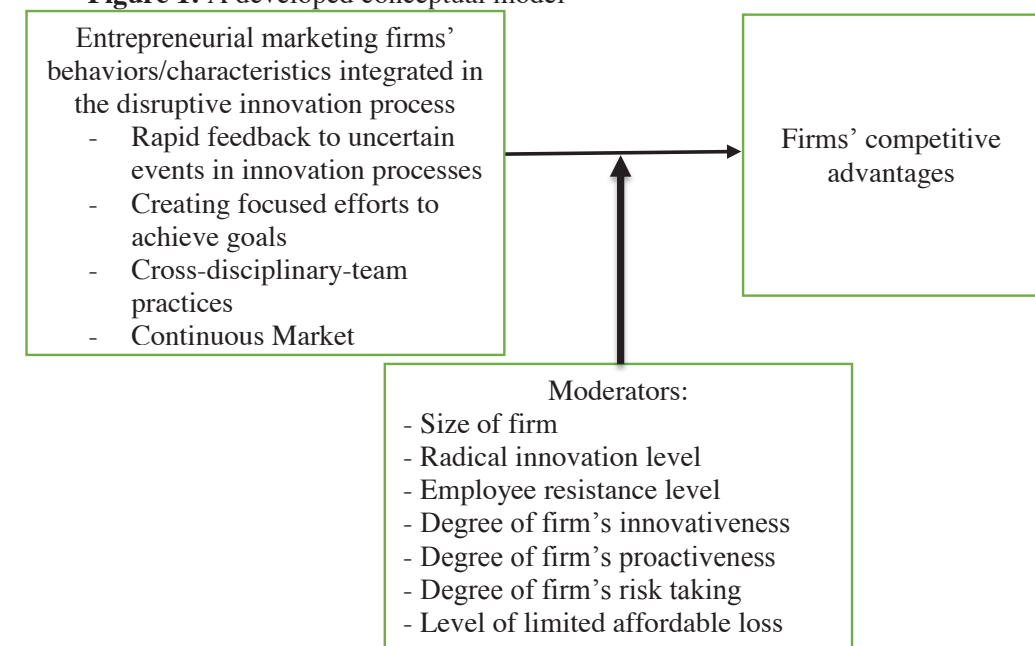
### 3. Theoretical Implications

As this study aims to provide a conceptual model and propositions for integrating disruptive innovation with the entrepreneurial marketing to enhance firms' competitive advantages, the selective literatures in the areas of disruptive innovation, entrepreneurship, entrepreneurial orientation, entrepreneurial marketing, and competitive advantage are reviewed. In specific, this paper adapts the four dimensional characteristics or behaviors of entrepreneurial decision making; means driven, affordable loss principle, partnership orientation, and acknowledge unexpected results of innovations proposed by Sarasvathy (2001) to be the framework of the entrepreneurial marketing firm's behaviors. The main reason of the adaptation is that Hills and Hultman (2013) who are the gurus in the entrepreneurial marketing accept the effectuation theory by using the dimensions to explain

the characteristics of entrepreneurial marketing firms. Furthermore, this paper pursues the Engel's (2011) proposed approaches to accelerate corporate innovation as the constructive theme to modify the four effectuation dimensions, since the Engel's (2011) guidelines can enhance the knowledge and understanding about the entrepreneurial marketing particularly that they can be applied for established firms as well. In addition, the Engel's (2011) entrepreneurial behaviors are consistent with the effectuation theory and the behavioral guidelines extend the limited scope of four dimensions.

Regarding the conceptual model (Figure 1.) and the proposed propositions, this article contributes to the current literatures by two important aspects. First, this study directly integrates the disruptive innovation aspect with the entrepreneurial marketing to find the crucial behaviors or characteristics of entrepreneurial marketing firms for enhancing the firms' competitive advantages with respect to the disruptive innovation process. For this contribution, Matsuno et al. (2014) point out there is little research doing this integration scheme. Therefore, this study originally opens the research forum for academics regarding the disruptive innovation process and characteristics, the entrepreneurial marketing behaviors or characteristics, and these dual aspects' congruency for enhancing the firms' competitive advantages. Second, with respect to the four developed propositions, this article draws the picture of important and specific behaviors or characteristics of the entrepreneurial marketing firms such as rapid feedback to uncertain events in innovation processes, creating focused efforts to achieve goals, cross-disciplinary-team practices, and continuous market engagement establishment, which are extended from current literatures of the disruptive innovation and entrepreneurial marketing. The proposed propositions could be developed to be hypotheses and put into empirical research to prove the effects of these behavioral dimensions. In addition, as the issues of small or medium firms and large firms whether these firms can enjoy the disruptive innovation outcomes. Also, according to the qualitative exploratory survey, there is the aspect of different knowledge and understanding of firms which may have relationships with the size of firm. That is, this article proposes the firm size into the conceptual model as a moderator. Likewise, both literatures and the qualitative exploratory survey results represent the different level of radical innovation of each firm that may have impact on the model. The radical innovation level is proposed into as the moderator too. According to these proposed conceptual model, this article can contribute to the current literature in various dimensions as are discussed above.

**Figure 1: A developed conceptual model**





#### 4. Management Implications

With regard to the selective literature reviews and the results of qualitative exploratory survey, this study can provide recommendations for practitioners as follows. First, to enhance competitive advantages as a result of disruptive innovations, firms should design organization's structure and system which can quickly respond to the uncertain events regarding the disruptive innovation. Established firms perhaps adjust themselves to have more mean-driven orientation as the entrepreneurial firm, rather than struck with the traditional analysis models. Conventional analysis models may delay the firms' response to the very uncertain situation of innovations. As a result, firms cannot adjust operational practices to cope with the dynamic conditions on time.

Second, practitioners particularly in the established firms which ever have used budget as the framework of risk taking may need to allow a loss from the innovation processes because this allowance can induce the breakthrough creative changes providing a higher profit later. The limitation of loss may prohibit the creativity which can overcome the high competitive markets. Thus, firm should adapt the behaviors or characteristics of entrepreneurial marketing in terms of creating effects that are consistent with and/or focused on to achieve the competitive goals. Third, the entrepreneurial marketing firms should develop a structure and/or program that can enhance a participation and involvement of key stakeholders joining together as a team especially for the members from different backgrounds and skills. The stakeholders can compose of internal employees and external partners by which the firms can obtain knowledge, information, expertise sharing. Contributions from the cross-disciplinary-team practices can enhance firms in execution of the disruptive innovation since the collaborating knowledge and skills can jointly guide the firm to develop innovative challenges effectively and efficiently.

Finally, the entrepreneurial marketing firms need to establish a continuous market engagement system. This activity can contribute to the firms to insight customers and obtain support from customers as the powerful relationships. As a result, the entrepreneurial marketing which has the market engagement can develop a disruptive product and service to challenge the mainstream market leaders very well.

#### 5. Future Research Recommendations

As this paper originally develops the integrations of disruptive innovation with entrepreneurial marketing by adapting relevant studying areas; disruptive innovation, entrepreneurship, entrepreneurial orientation, entrepreneurial marketing, and competitive advantage, there is a need to push the proposed propositions into an empirical research. In particular, the developments of each construct and measure are required. Furthermore, the conceptual model and propositions are developed mostly from the Western literatures. There may be deviation and incompatible aspects with respect to the cultural diversity. Thus, there may be a need to extend the literature studies to other cultural domains. Similarly, most of previous empirical research have examined under the Western data sets. Therefore, there may be a requirement to conduct empirical studies using various geographical samples. Furthermore, the developed conceptual model and proposed propositions do not identify the characteristics consistent with particular business contexts for which there may be some deviations. Consequently, in the empirical survey, it may be necessary to incorporate this context aspect as a moderating variable in the model.

#### 6. Conclusions

This article aims to develop the integration of disruptive innovation with entrepreneurial marketing to enhance competitive advantages by conducting exploratory literature research. To achieve this intention, a qualitative exploratory survey is conducted to provide a background knowledge for the author and also to support relevant constructs and/or moderators that should be included in the model. Then, relevant literatures are reviewed in the areas of disruptive innovation, entrepreneurship, entrepreneurial orientation, entrepreneurial marketing, and competitive advantage, and then a conceptual model is developed and four propositions are proposed for future empirical research. In particular, this paper originally contributes to the current literatures by proposing modified and extended entrepreneurial marketing behaviors with which the firms' competitive advantages are expected as a result when there is a conduct of disruptive innovation. Four specific entrepreneurial marketing behaviors under various anticipated moderators are proposed to enhance the disruptive innovation, then result in the firms' competitive advantages, composing of rapid feedback to uncertain events in innovative processes, creating focused efforts to achieve goals, cross-disciplinary-team practices, and continuous market engagement establishment. For academic implications, further research is suggested such as identifications of each construct, measurement developments, cause-effect hypothesis testing, incorporation of cultural and context effects, and investigations for the moderating and mediating effects of relevant constructs. For management implications, practitioners should be concerned the four specific behaviors of the entrepreneurial marketing as proposed in this paper for conducting the disruptive innovation successfully.

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Appendices

Table 1: Respondent Profiles in the Qualitative Exploratory Survey

Respondent	Gender	Age (years)	Position in company	Time length in position (years)	Business Type	Nationality of major control	Revenue per year (Million Baht)	Net profit per year (Million Baht)
A	M	61	DMD	10	Pharmaceutical and Vaccine	Thai	12,000	1,300
B	M	56	MD	20+	IT Distribution	Thai	18,000	200
C	F	56	SBDM	3	Pharmaceutical and Medical Equipment	USA	2,000+	NS
D	M	56	GM	3.3	Automobile Parts Manufacturing	Japanese	4,500	350
E	M	58	CEO	1.5	Drilling Pipe	Thai	500	65
F	M	54	MD	5	Pledge	Thai	10	0.7
G	M	36	BM	3	Retailing	Thai	300	40
H	M	52	MD	20	Science and Medical Equipment	Thai	200	15
I	F	29	MD	1.5	Production Factors for Garden Fruits	Thai	1.2	0.5
J	M	NS	MD	4	Chemical Fertilizer	Thai	15	5
K	F	58	EVP	5	Banking	Thai	NS	200
L	F	54	MD	16	Medical Lab	Thai	400	25
M	M	50	D	19	Motorcycle Business	Japanese	500,000	25,000

Notes: M = male, F = Female, CEO = Chief Executive Officer, MD = Managing Director, DMD = Deputy Managing Director, EVP = Executive Vice President, D = Director, GM = General Manager, BM = Branch Manager, SBDM = Service Business Development Manager, NS = Not specify

**Table 2:** Knowledge and Opinion about General Innovation and Disruptive Innovation in the Qualitative Exploratory Survey

Respondent	Knowledge about General Innovation	Knowledge about Disruptive Innovation	Opinion when definition of Disruptive Innovation is provided
A	<i>New product concept, technology, usage, package, shape, and style that significantly differ from today and create benefit or value to user</i>	<i>It is completely different from the existing one, that the new concept, new way of thought and new way of producing, new way of usage can satisfy the unmet demand. Unmet demand is already known or not yet recognized.</i>	<i>In my business, there is the needs of breakthrough technology in delivering new medicines or vaccine. Our firm uses these technologies in creating or enhancing our competitiveness and value driver through new products introduced to the markets.</i>
B	<i>New thing or new way enhances current operations</i>	<i>New thing or new way that is better than the past one and can substitute the past one.</i>	<i>Disruptive innovation is a need for us. Also, we should execute and lead other firms. For example, let employees have key information for their decision makings.</i>
C	<i>New way or improved way which is different from the previous one and more appropriate. It must be proved that it is an effective and efficient approach.</i>	<i>It is a new technology that definitely different from the previous approaches. This new thing or new way can make the previous one obsolete.</i>	<i>Disruptive innovation is suitable to our firm.</i>
D	<i>It is a new technology, thinking, production process or working process or new idea for making things better.</i>	<i>Not sure about it. It is the innovation for doing thing much simpler with moderate quality required and a lot cheaper price.</i>	<i>Japanese manufacturers always use the KAIZEN process to find improvements that sometimes lead to some innovations. We always face challenges from copy cats. We have to think outside the old box to create new products with lower price but reasonable quality.</i>
E	<i>It is technology, thinking methods, production process, and creative process which are created and developed differently from the previous ones. It makes life better or up to date.</i>	<i>Breakthrough technology. Simpler products or services. Lower prices. Make more people affordable.</i>	<i>We are pushing this concept into our company too.</i>
F	<i>Inventions, products, and services which are produced and have benefits.</i>	<i>Products or services are invented and have high effectiveness and efficiency (lower costs) in facilitating people</i>	<i>It may not fit to our firm and we have never applied it to our firm.</i>

**Table 2:** Continued

Respondent	Knowledge about General Innovation	Knowledge about Disruptive Innovation	Opinions when respondent is provided by the definition of Disruptive Innovation
G	<i>New things</i>	<i>I do not understand this kind of innovation.</i>	<i>I think it may be suitable for our company, however we have never tried to use it.</i>
H	<i>Products or services which create better value to satisfy recognized needs or unrecognized needs.</i>	<i>Breakthrough changes in our thinking, knowledge, operations, and technology.</i>	<i>Our competitive situations, business opportunity, and consumer behaviors force us to use disruptive innovation. I have started this scheme, e.g. setting up structure (creative environment), encouraging employees to learn and propose new ideas.</i>
I	<i>Concept development and new thing creation which add value to the existing things.</i>	<i>Integrating technology and business management to create new things, develop products and services which can change customers' attitude.</i>	<i>It should be suitable for our business. At this moment, we use innovation or technology in our business operations. For example, we facilitate our customer by website trading. Also, social media is applied in our business. Our innovation is the delivery of products to customers' house door.</i>
J	<i>Applying new process or new way to improve current knowledge. The innovation must change our current operation.</i>	<i>It will change the current situations inevitably. It must not be the same as the previous one.</i>	<i>This kind of innovation will impact our business considerably. For example, a knowledge and background provision to customers will absolutely change their perception. The customers will not pay too much attention on price as usual.</i>
K	<i>Creating new things</i>	<i>Creating new things that have never happened before and also are unexpected. These new things will change behavior significantly.</i>	<i>We have tried to empower and enrich our organization to have this innovation as a core competency. We build creative activities and set up rewards, recognitions, budget to support the innovation creation.</i>
L	<i>New things from human creativity. It is new and gives both direct and indirect benefits to human being.</i>	<i>Remarkable changes from previous situations. These changes make the previous ones obsolete.</i>	<i>This innovation is suitable for our company. We need to search new technology for serving customers more comfortably and faster, and satisfying their needs. This innovation will change our operation process and customer behavior with the confidence and the belief of added value.</i>



Table 2: Continued

Respondent	Knowledge about General Innovation	Knowledge about Disruptive Innovation	Opinions when respondent is provided by the definition of Disruptive Innovation
M	<i>Innovation is the new creation of products or services that will improve people's living, productivity and well-being. Innovation is the result of new technological breakthrough or new creation/new application of existing body of knowledge that will create new segment and benefit the mass market.</i>	<i>The term is to introduce new concept of marketing to be attractive to marketers, or to introduce new marketing tactics in response to changes of customer trends.</i>	<i>The disruptive innovation is the desirable way of strategic direction that will enable the organization to have sustainable business growth. Our company is striving to achieve disruptive innovation at all business units. It takes time. Success and failures happened. Technological innovation or introduction can happen with new creation, however, the acceptance of customers are uncontrollable. Also, may be it is the matter of time.</i>

Table 3: Respondents' Knowledge about entrepreneurship and entrepreneurial marketing (EM), perception of EM characteristics, and key success factors for disruptive innovation in the Qualitative Exploratory Survey

Respondent	Understanding about entrepreneurship	Understanding about entrepreneurial marketing	Perceived key characteristics of entrepreneurial marketing	Key success factors for Disruptive Innovation process
A	<i>Spirit or sense of doing business by thinking and acting like the owner of business</i>	<i>Focusing on opportunities and being ready to take risks. Accountable for decision making.</i>	<i>Opportunity seeker. Risk taker. Decisiveness. Accountable and full of responsibility including marketing concepts and experience.</i>	<i>Open welcome and promote new ideas, not strict to rules but focus on results rather than process.</i>
B	<i>Seeking business opportunities. Always assess opportunities and then exploit the opportunity to make benefit and profits for the firm.</i>	<i>Extended scope of marketing. Realizing wider scope of markets and covering all dimensions affecting firm performance.</i>	<i>Employees act as owner or have entrepreneurship. A firm should have the structure and process to drive new things, reduce limitations, and accept risks and mistakes.</i>	<i>Management must accept mistakes and risks in the process. Also management should support the innovation. For higher difference and higher risks, there should be a unique and independent unit operating the innovation.</i>

Table 3: Continued

Respondent	Understanding about entrepreneurship	Understanding about entrepreneurial marketing	Perceived key characteristics of entrepreneurial marketing	Key success factors for Disruptive Innovation process
C	<i>Having ability in opportunities discovery and opportunities exploitation to develop competitive advantage and capability to satisfy customer needs. Also, being able to adjust itself to the changing environment.</i>	<i>Thinking as an owner when doing marketing</i>	<i>Motivating and paying trust.</i>	<i>Management must really focus on the process by supporting and inspiring employees to think and invent disruptive products.</i>
D	<i>Mindset of the entrepreneur can make business successful, profitable and sustainable.</i>	<i>New thinking of marketing to make business successful, profitable, and sustainable.</i>	<i>Knowledge oriented. Proactively accepting changes and moving fast.</i>	<i>Making clear policy by owner and management toward the innovations. Also providing necessary resources to move forward.</i>
E	<i>Having a spirit of entrepreneur in doing business to obtain sustainable continuous growth and profits.</i>	<i>Concerning firms' profits rather than customers' benefits.</i>	<i>Having people ready for changes. Also these staffs should accept learning new things, new technology, new marketing theory, and following new conceptual procedures.</i>	<i>Executive management has commitment with the firm's policy and provides sufficient resources in the innovation process.</i>
F	<i>Having responsibility, creativity, knowledge and skill, and commitment to achieve business's objectives</i>	<i>Using knowledge and various tools of marketing to achieve business's objectives effectively and efficiently.</i>	<i>Need analysis, planning, policy, and marketing tools for being ready to serve customers' needs</i>	<i>Knowledge, openness, not-strict with rules or traditional formats for both management and employees. Having commitment and continuously seeking opportunity and exploiting that opportunity.</i>
G	<i>Having capability and concerning business ethics.</i>	<i>Concerning only firm's profit.</i>	<i>Focusing on business performance. Concerning investment returns and long term performance.</i>	<i>Looking for new opportunity from the current business.</i>

Table 3: Continued

Respondent	Understanding about entrepreneurship	Understanding about entrepreneurial marketing	Perceived key characteristics of entrepreneurial marketing	Key success factors for Disruptive Innovation process
H	<i>Process of opportunity analysis by using business analysis tools and/or their experiences to make decisions from the data and developed plan. Exploiting and doing business with commitments and believes.</i>	<i>Focusing on strategic or marketing plans which create difference and uniqueness concerning the firm's strengths and customer value to get better solutions than the traditional marketing. In particular, continuously access the specific target markets and create innovation.</i>	<i>Startup businesses. Depending on innovation and new or emerging technology for swift growth by using strategic marketing.</i>	<i>Strategic innovation orientation and realistic practices. Customer engagement and the setting up of new strategic value of products and services. Open for difference and ready for application of external ideas, user experience, new opportunity. Having analysis capability, such as trend analysis. Sustaining and having commitment with the marketing plans under the disruptive innovation.</i>
I	<i>Characteristics which entrepreneur should have such as having creative thinking and good leadership</i>	<i>The operational directions, led by marketing strategy, are to create difference or uniqueness for competitive capability and successful markets.</i>	<i>Having marketing strategy, innovation, value added, and uniqueness which affect customers' decision making for buying the firm's products. Accessing target markets faster by integrating technology for doing business.</i>	<i>Customer insight, business model insight, integrating technology for accessing target markets effectively and efficiently. Also, having patient. Unique or different products or services, and taking risks.</i>
J	<i>It is entrepreneur who comprehends the business model from its establishment to current operation.</i>	<i>The management pursues marketing strategy integrated with entrepreneurship by focusing, attending, committing from its establishment to current operation.</i>	<i>Realizing customer problems and value.</i>	<i>Having communication capability that can convey considerable value to customers.</i>

Table 3: Continued

Respondent	Understanding about entrepreneurship	Understanding about entrepreneurial marketing	Perceived key characteristics of entrepreneurial marketing	Key success factors for Disruptive Innovation process
K	<i>Management has accountability as business owner or whatever the management has operated is to achieve the best practices and has responsibility to company and customers.</i>	<i>Thinking, creating, executing, and making decision to achieve the firm's goals as being business owner. Also, it is operation led by marketing.</i>	<i>Creating brand and having proactive operations to lead markets as being owner. Daring to make decision or having proactive risk taking.</i>	<i>Having entrepreneurial decision making. Also, having culture and mindset of brave in terms of thinking, doing, defending, offending, and openness for stakeholders' opinions.</i>
L	<i>Seeking opportunity, having specific markets, having capital and resources. Also having the sustainable growth approaches.</i>	<i>Accounting the marketing concepts as the first priority.</i>	<i>Orientation in markets. Having continuous product or service development. New products or services must satisfy markets. Creating market and promoting value and behaviors that have good relationships with firm.</i>	<i>Having continuous improvement and catching up new technologies. Having vision that encourages the out of box thinking. Having commitment, budget, R&amp;D, good organization cultures, and good governance.</i>
M	<i>Entrepreneurship is the sense of innovation, ownership, leadership, investment justification, resource allocation and ability to have critical thinking to ensure business survival. Entrepreneurship is required competency of any organization that would like to ensure competitiveness in long run.</i>	<i>It defines the qualities of new marketing sense to have entrepreneurial spirit. Desirable qualities are fostered such as strategic thinking, customer insights, organization alignment, business justification, and valued added supply chain management. Together with mind set to response to customers' need, such as organization agility, knowledge management and customer responsiveness.</i>	<i>It is the characteristics of marketing firm that have the sense of entrepreneurship.</i>	<i>Analyze market characteristics and customer behavior carefully. Product design should maximize the ability to meet customer's benefit. Marketing approach should be based on customer view point, not technological viewpoint. Possess ability to have continuous improvement and feedback to product design section as evaluation.</i>

**Table 4:** Respondents’ opinion about the entrepreneurially oriented firms’ characteristics and their effects on innovation process

Respondent	Agreement with the characteristics of entrepreneurial oriented firms in terms of innovativeness, proactiveness, and risk taking	How do firms’ innovativeness, proactiveness, and risk taking affect the innovation process
A	<i>The major characteristic of an entrepreneur is looking for opportunities to create profit under any possibility.</i>	<i>We promote people in R&amp;D to be innovative and proactive. In the successful implementation cases, senior employees support young ones by bringing their ideas into practices and providing reward in terms of benefit and reputation.</i>
B	<i>In doing new things, we need proactive manner and generally take risks since it is the new way and has never happened before. We cannot use the previous approach to the new things development process.</i>	<i>These characteristics are the key success factors for innovation process.</i>
C	<i>These characteristics represent an innovation concern, a concentrated practice focus and long term goal orientation.</i>	<i>These characteristics drive us to focus on technology and long term goals.</i>
D	<i>Doing business is always risk taking in some degree depending on the owner’s policy. No risk no gain. Proactiveness is needed but if you experience some mistakes you have to correct them.</i>	<i>No doubt. Innovativeness, proactiveness and risk taking with a proper mixed ratio are required for our firm to move forward in the competitive world.</i>
E	<i>These manners can drive our organization excitedly and faster. We can change from defensive to offensive. Also, they make us easier to correct mistakes.</i>	<i>These can increase competitive capability in the innovation process.</i>
F	<i>They are normal for entrepreneurially oriented firms.</i>	<i>They are drivers for achieving goals. Innovativeness and proactiveness will drive the innovation process. However, if risk is so high, it may be the barrier for innovation.</i>
G	<i>They make us searching for new opportunities and getting progress. Risk taking is normal because we cannot predict exactly the outcomes of our decision making. So, every operation has risks.</i>	<i>Enhancing high innovation and extreme format of innovation.</i>
H	<i>They are the key factors driving new product markets, creativity, difference, and value added. Need to look for successful opportunities and investments worth making.</i>	<i>Positive effects on innovation. They can increase firms’ competitive capability without high costs. These characteristics can enhance the strengths of team in terms of potential and creativity development for continuous operations.</i>
I	<i>Enhancing business development in the current high-competitive situations</i>	<i>Make changes. Develop products and services. Add value to product considerably. For example, based on these characteristics, our company creates the creative packages serving each customer need.</i>

**Table 4:** Continued

Respondent	Agreement with the characteristics of entrepreneurial oriented firms in terms of innovativeness, proactiveness, and risk taking	How do firm’s innovativeness, proactiveness, and risk taking affect innovation process
J	<i>They can make value added products. Customers realize the value of products.</i>	<i>Reducing competitions and providing benefits to customers.</i>
K	<i>Entrepreneurial decision making is the key success factor of disruptive innovation process. Firms must have innovative cultures and mindset, such as readiness for thinking, doing, moving forward and backward.</i>	<i>Firms can always search and discover new opportunities. Also firms can overcome challenges and get the position of leader easily.</i>
L	<i>Develop continuously. Being a leader and faster in markets. Readiness for risk management should be normal for sustainable growth.</i>	<i>Enforcing to carefully and proactively innovate the products wanted by markets. Encouraging to discover, assess, and manage risks.</i>
M	<i>Entrepreneurial firms act as investors in economic system. The firm should be opportunity taking and risk taking. Having market innovation and proactiveness will ensure success in the long run.</i>	<i>They are critical to a firm’s success in introduction of innovative products. New product must be unique, user friendly and clearly showing customer benefits. At the same time, the new product should enhance safety and environmental care. The firm should be proactive by analyzing customer changes, anticipating demand and adjusting product design accordingly. The innovative process should be swift to respond to market feedback. At the same time, the firm should strive for continuous improvement in innovative process.</i>



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PURCHASE BEHAVIOR: A CONCEPTUAL MODEL  
FOR THAI CONSUMERS**

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## Abstract

In this article, we examine factors that affect consumer attitudes and purchase intention toward retirement saving plan. Using factors identified from a focus group interview of existing customers and Theory of Reasoned Action as the conceptual framework, it is posited that intention to buy a retirement saving plan is determined by two attitudes (attitude toward the product and attitude toward the salesperson) and subjective norm. Attitude toward the product is determined by perceived benefits of the product (i.e., tax benefit, amount of annuity, length of annuity, life protection) and perceived disadvantages (i.e., low return, long-term commitment). Attitude toward the salesperson is determined by perceptions about the salesperson (i.e., expertise, empathy, likeability, trustworthiness). Finally, subjective norm is influenced by perceived approval or support of important others (i.e., parents, spouse/boyfriend-girlfriend, friends/colleagues). The theoretical contribution, managerial implications, and limitations and future research direction are also discussed.

**Keywords:** Retirement Saving Plan, Attitude toward Retirement Saving Plan, Attitude toward Salesperson, Subjective Norm, Purchase Intention

## 1. Introduction

As the world population is growing older and older, the saving for retirement is becoming more and more important problem for governments. As such, encouraging consumers to purchase a retirement saving plan is a challenge for both policy makers and retirement saving plan or pension plan providers especially in less developed countries. For example, according to SNL Financial LC (2014), Statista (2015), The Thai Life Assurance Association (2014), and Office of the National Economic and Social Development Board (2015), the retirement saving plan premium in the US in 2014 was US\$352.8 billion. This accounted for 2.03% of the US's 2014 GDP. According to the report from Office of Insurance Commission, the pension plan premium in Thailand in 2012, 2013, and 2014 were

3.910 billion Baht (US\$111.7 million), 4.433 billion Baht (US\$126.6 million) and 4.961 billion Baht (US\$141.7 million), respectively. These accounted for 0.034%, 0.037%, and 0.041% of Thailand's GDP in 2012, 2013 and 2014, respectively. Although the trend is quite promising (i.e., over 10% annual growth), the total amount of private annuity retirement saving plans held by Thai consumers are still very low compared to those of the US.

How can policy makers and retirement saving plan providers especially those in less developed countries such as Thailand motivate consumers to purchase their own individual retirement saving plans? The answer to this question relies on the understanding of the process by which the consumers in these countries use in their purchase decisions of retirement saving plan as well as the factors that can significantly affect their decision processes.

This article is an attempt to conceptualize the retirement saving plan purchase decision model for Thai consumers by (1) identifying factors that are likely to affect consumers' attitudes toward retirement saving plan, (2) relating these factors, attitudes, and purchase intention in a model, and (3) developing research propositions for future empirical research. This article would provide a conceptual model for empirical investigation. The findings from the empirical study would provide insights and managerial implications to both policy makers and retirement saving plan providers on how to effectively promote retirement saving plans.

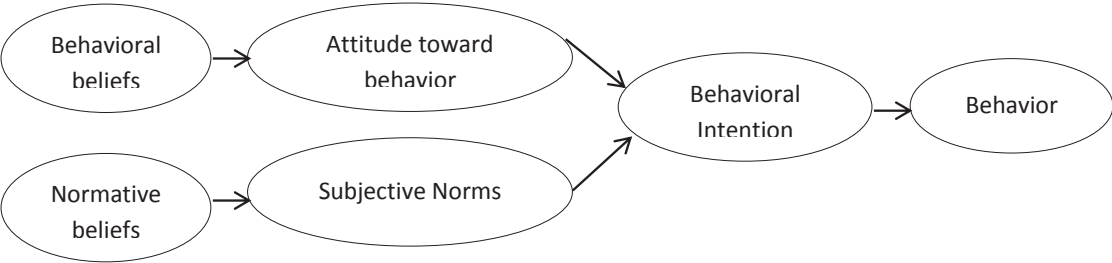
2. Literature review

Literature review shows that there has not been any study that directly addresses consumers' retirement saving plan purchase behavior. To conceptualize the conceptual model for consumers' retirement saving plan, a qualitative research (i.e., focus group interview with eight existing customers of retirement saving plan) supplemented by literature review in selling literature was used. Specifically, based on the findings from the focus group interview, relevant literature was identified to support the findings.

Based on the findings from the focus group interview (to be discussed in the results section), review of attitudinal models was conducted to identify the appropriate model for conceptualizing the retirement saving plan adoption behavior. The literature review identified theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) as the appropriate conceptual framework to conceptualize the retirement saving plan purchase behavior.

Derived from the social psychology setting, the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen 1975) is a model for predicting behavioral intention. According to the model, a person's behavioral intention depends on the person's attitude toward the behavior and the subjective. Attitude toward the behavior, defined as the overall evaluation of the behavior, is a function of the person's cognitive beliefs about the positive and negative consequences of the behavior. Subjective norm, defined as the perception of the person's about the overall attitude of important others toward the behavior, on the other hand, is a function of the person's normative beliefs about approval/support of important others toward the behavior. Figure 1 shows the overview of the theory of reasoned action.

Figure 1: The Theory of Reasoned Action (Fishbein & Ajzen, 1975)



Based on theory of reasoned action and based on the findings from the focus group interview, the conceptual model of retirement saving plan purchase behavior can be specified as follow. Purchase intention is positively affected by attitude toward the product (i.e., retirement saving plan), attitude toward salesperson, and subjective norm.

Review of literature on factors affecting financial products in general and retirement saving plan in particular reveals that there is no empirical studies in these topics. Review of literature on the characteristics of salespersons on attitude toward salesperson or salesperson's performance show that the characteristics identified in the focus group interview are empirically supported. In the context of adoption of new pharmaceutical product, Powpaka (1996a) found that perceived expertise, empathy, and likeability have positive impact on attitude toward salesperson, which in turn, positively affects attitude toward new product. Attitude toward the product and attitude toward salesperson, in turn, positively affect product adoption intention.

In their meta-analysis on salesperson's performance, Churchill, Ford, and Walker (1985) found aptitude, skill (i.e., expertise), motivation, role, and personal factors (e.g., demographic and psychographic characteristics) are significant determinants of salesperson's performance. The findings imply that (1) salespersons with higher skills tend to be perceived to have higher expertise, (2) salespersons with higher motivation and aptitude tend to be perceived to be more empathetic and trustworthy, and (3) salespersons with positive personal characteristics tend to be perceived to be more likeable. The significant effects of these factors on salesperson's performance also imply that these characteristics significantly affect customers' attitude toward salesperson.

Review of literature on the influence of important others show that the important others identified in the focus group interview are empirically supported. In the context of organ donation, Powpaka (1996b) found that perceived approval or perceived support by family and that by boyfriend/girlfriend or spouse positively affect subjective norm. However, subjective norm does not significantly affected intention to donate organ as hypothesized.

3. Results

3.1 The Focus Group Interview

A focus group interview of eight current buyers of retirement saving plans in Thailand was conducted. All of them were existing customers of a major AIA company in Thailand. The participants included four males and four females between the age of 30 and 55 and all had bought the retirement saving plan for at least two years.

The discussion centered on the participants' experiences relating to their purchase decisions. The moderator's questions covered such topics as the benefits and disadvantages of retirement saving plan, the attributes used to evaluate the saving plan, and people who influenced their purchase decision.



The focus group interview revealed three categories of factors that affected the participants' attitude and purchase decisions:

- product-related factors including benefits of the retirement saving plan (i.e., amount of annuity, length of annuity, tax benefit, life protection) and disadvantages of the retirement saving plan (i.e., low rate of return, length of commitment),
- salesperson - related factors (i.e., perceived expertise, empathy, likeability, trustworthiness), and
- important others (i.e., family members such as parents and spouses, friends/colleagues).

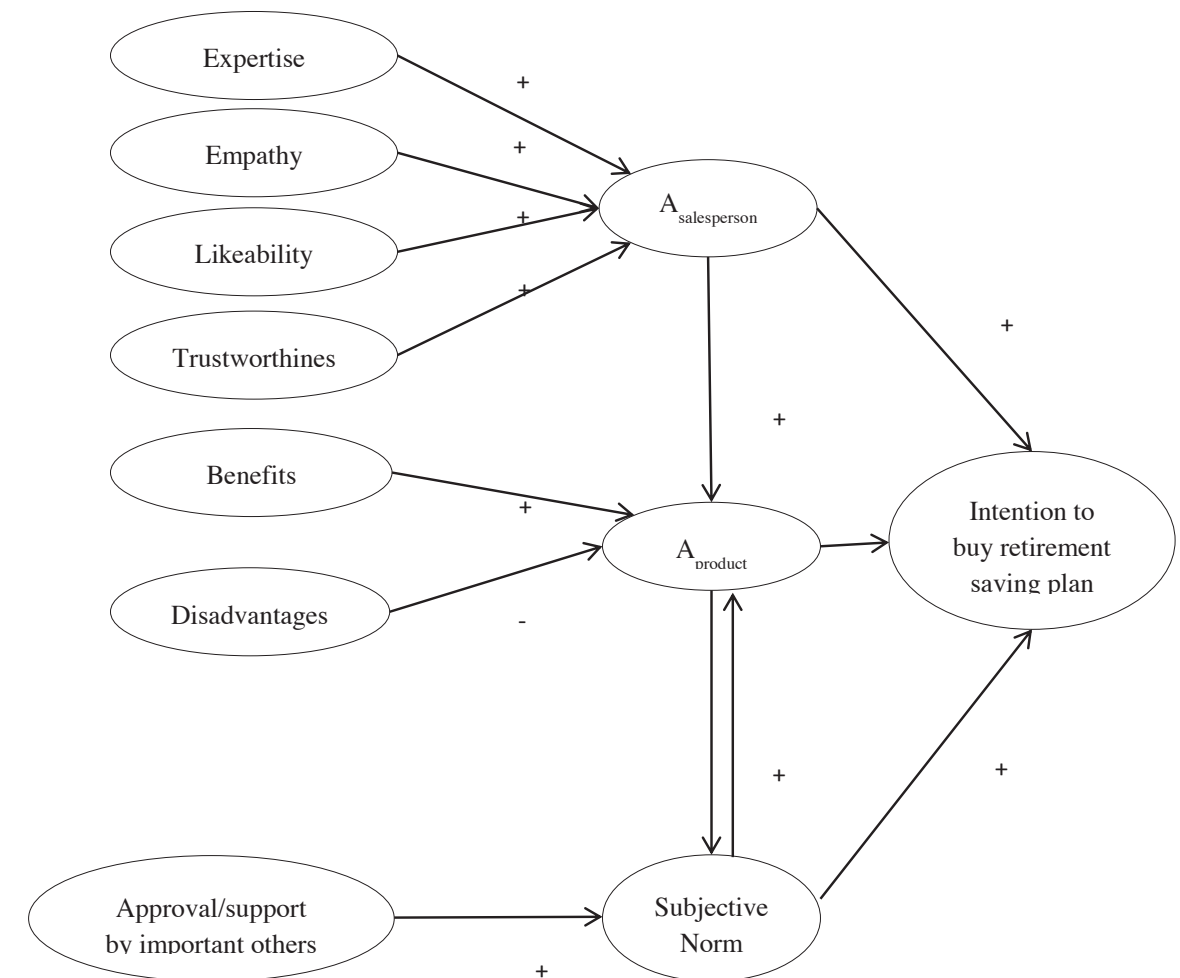
The focus group interview also revealed the following relationships:

- the product-related factors affected attitude toward the product (i.e., retirement saving plan),
- the salesperson-related factors affected attitude toward the salesperson,
- approval or support by important others subjective norm (i.e., perception of overall attitude of important others toward buying retirement saving plan), and
- purchase decision (i.e., purchase intention) was affected by attitude toward the retirement saving plan, attitude toward the salesperson, and subjective norm.

### 3.2 The Conceptual Model

The conceptual model of the retirement saving plan adoption behavior is based on the theory of reasoned action. Figure 2 shows the overview of the conceptual model. According to the model, purchase intention is positively affected by attitude toward the retirement saving plan, attitude toward the salesperson, and subjective norm. Attitude toward the saving plan is, in turn, positively affected by the benefits of the saving plan (i.e., amount of annuity, length of annuity, tax benefit, life protection) but negatively by the perceived disadvantages of the saving plan (i.e., low rate of return, length of commitment). Attitude toward the salesperson is positively affected by the salesperson's perceived expertise, empathy, likeability, and trustworthiness. Finally, subjective norm is positively affected by perceived approval or support by important others including parents, spouse/ boyfriend - girlfriend, and friends/ colleagues.

**Figure 2:** The Retirement Saving Plan Purchase Behavior Model



In the following sections, research propositions are developed on the basis of the qualitative data from the focus group interview. These propositions are also supported by empirical evidence if available.

#### 3.2.1 Factors Affecting Attitude toward the Retirement Saving Plan

The participants in the focus group interview identified the following benefits of the retirement saving plan: amount of annuity (e.g., "The amount of monthly annuity is sufficiently large for me"), length of annuity (e.g., "Getting monthly annuity until the age of 85 is quite adequate for me"), tax benefit (e.g., "I like the tax exemption for buying the retirement saving plan"), and life protection (e.g., "Additional life protection from the saving plan is attractive to me"). They also identified the following disadvantages of the retirement saving plan: the low rate of return (e.g., "The rate of return of the retirement saving plan is too low compared to other forms of investment") and length of commitment (e.g., "I have to keep paying my premium for a very long period of time before I can get my annuity").

Based on the qualitative data, the definitions of the factors affecting attitude toward the retirement saving plan are provided. Specially, amount of annuity is defined as the sufficiency of the amount of monthly payment from the retirement saving plan after maturity. Length of annuity is defined as the sufficiency of the length of monthly annuity from the retirement saving plan after maturity. Tax benefit is defined the extent of tax exemption from the retirement saving plan. Life protection is defined as the amount of life protection provided by the retirement saving plan. Rate of return is defined as the level of return from the retirement saving plan relative to other forms of investment. Length of commitment is defined as the level of commitment the customer needs to make in the retirement saving plan until the age of 60. Finally, attitude toward buying the retirement saving plan is defined as the overall evaluation in a favorable or unfavorable way toward the retirement saving plan.

According to the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), attitude toward a behavior is a function of cognitive beliefs about the positive and negative consequences of the behavior. As such, the following research propositions are proposed for factors affecting attitude toward buying the retirement saving plan:

- P<sub>1</sub>: Amount of annuity positively affects attitude toward buying the retirement saving plan.
- P<sub>2</sub>: Length of annuity positively affects attitude toward buying the retirement saving plan.
- P<sub>3</sub>: Tax benefit positively affects attitude toward buying the retirement saving plan.
- P<sub>4</sub>: Life protection positively affects attitude toward buying the retirement saving plan.
- P<sub>5</sub>: Rate of return positively affects attitude toward buying the retirement saving plan.
- P<sub>6</sub>: Length of commitment negatively affects attitude toward buying the retirement saving plan.

### 3.2.2 Factors Affecting Attitude toward the Salesperson

Some participants indicated that salesperson also played an important role in their decisions to buy the retirement saving plan. The characteristics of the salesperson that shaped their attitude toward the salesperson included perceived expertise (e.g., “He knows the products very well”), empathy (e.g., “My salesperson understand my needs very well”), likeability (e.g., “She has a very pleasant and likeable personality”), and trustworthiness (e.g., “I can really trust my salesperson to do the best thing for me”).

Review of literature on the characteristics of salespersons on attitude toward salesperson or salesperson’s performance show that the characteristics identified in the focus group interview are empirically supported. In the context of adoption of new pharmaceutical product, Powpaka (1996a) found that perceived expertise, empathy, and likeability have positive impact on attitude toward salesperson, which in turn, positively affects attitude toward new product. In their meta-analysis on salesperson’s performance, Churchill, Ford, and Walker (1985) found aptitude, skill (i.e., expertise), motivation, role, and personal factors (e.g., demographic and psychographic characteristics) are significant determinants of salesperson’s performance. The findings imply that (1) salespersons with higher skills tend to be perceived to have higher expertise, (2) salespersons with higher motivation and aptitude tend to be perceived to be more empathetic and trustworthy, and (3) salespersons with positive personal characteristics tend to be perceived to be more likeable. The significant effects of these factors on salesperson’s performance also imply that these characteristics significantly affect customers’ attitude toward salesperson.

Based on the literature review, perceived expertise is defined as the extent or level of the salesperson’s product knowledge and ability to explain the product to the customer (Churchill, Ford, & Walker, 1985; Powpaka, 1996a). Empathy is defined as the extent that the salesperson is perceived to understand the customer’s needs and wants (Churchill, Ford, & Walker, 1985; Parasuraman, Zeithaml, and Berry, 1988; Powpaka, 1996a). Likeability is defined as the extent that the salesperson is perceived to be pleasant and likeable (Powpaka, 1996a). Trustworthiness is defined as the extent that the salesperson is perceived to be trustworthy, dependable, and reliable (Churchill, Ford, & Walker, 1985). Finally, attitude toward the salesperson is defined as the overall evaluation in a favorable or unfavorable way toward the salesperson (Powpaka, 1996a).

Apart from findings by Powpaka (1996a), according to Ajzen & Fishbein (1980) and Fishbein & Ajzen (1975), attitude toward an attitudinal object is a function of cognitive beliefs about the attitudinal object. Since perceived expertise, empathy, likeability, and trustworthiness are the consumer’s cognitive beliefs about the salesperson, the following research propositions are proposed:

- P<sub>7</sub>: Perceived expertise positively affects attitude toward the salesperson.
- P<sub>8</sub>: Empathy positively affects attitude toward the salesperson.
- P<sub>9</sub>: Likeability positively affects attitude toward the salesperson.
- P<sub>10</sub>: Trustworthiness positively affects attitude toward the salesperson.

### 3.2.3 Perceived Approval/Supports of Important Others and Subjective Norm

Most of the participants in the focus group interview indicated that their decisions to buy retirement saving plan were also influenced by the encouragement or approval of important others. The important others included family members including parents (e.g., “My parents advise me to buy retirement saving plan”, spouse/ boyfriend - girlfriend (e.g., “My wife greatly support me to buy retirement saving plan”), and friends/colleagues (e.g., “My close friend recommended me to buy the plan”).

Review of literature on the influence of important others show that the important others identified in the focus group interview are empirically supported. In the context of organ donation, Powpaka (1996b) found that perceived approval or perceived support by family and that by boyfriend/ girlfriend or spouse positively affect subjective norm, which in turn, positively affects attitude toward organ donation. Based on the qualitative data, approval by important others is defined as the extent or level of approval/ support of the important others (including parents, spouse/boyfriend-girlfriend, friends/ colleagues) in buying the retirement saving plan as perceived by the consumer (Powpaka, 1996b). Subjective norm is defined as the perception of the overall attitude of important others regarding the buying of retirement saving plan (Powpaka, 1996b).

Apart from the findings by Powpaka (1996b), according to the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), subjective norm is a function of normative beliefs. Since approval by important others can be considered as a normative belief, the following proposition is proposed:

- P<sub>11</sub>: Approval by important others positively affect subjective norm.



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ON BUYING PET FOOD IN CHINA**

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## Abstract

This study contributes to a deeper understanding of the impact of different factors on Chinese consumer behavior on buying pet (dog or/and cat) food in China.

The research analysis was based on 385 samples that collected from Chinese consumer who buying pet food in China. The data and information collected by primary data method by using the questionnaire which was designed in Chinese language for Chinese respondents in order to ensure the reliability and validity of the research instrument. The questionnaire was directly distributed and collected the data of questionnaires through the online survey platform, and directly sending the link of questionnaire and the QR code of questionnaires to the social network especially pets social network via internet and social group especially pet social group. The data from questionnaire were analyzed by Statistical program: i.e. Frequency, Percentage, Mean and Standard Deviation. The relation was presented thought the One-Way ANOVA and Multiple Regression.

From the study, the in-depth analysis found that buyer decision process strongly associated with consumer behavior on buying pet food. Gender has no relationship with consumer behavior on buying pet food. Both marketing stimuli and buyer characteristics have relationship with consumer behavior on buying pet food. The results may assist producers and retailers in understanding consumer behavior and improving the quality and popularity of pet food, improving the market competitiveness.

**Keywords:** Consumer behavior, Marketing stimuli, Environmental stimuli, Buyer characteristics, Buyer decision process

## 1. Introduction and Problem Statement

In the middle of the last century, pet food in the United States and Europe rapid development, from the end of last century to the beginning of this century, pet food and pet industry have completed the stage development in the United States and Europe. In 2001, pet

generated \$27.6 billion in spending in the U.S. economy, In Sweden, 57% of dog owners to buy pet insurance for their dog, in Germany, 17% of national income from pet food and related industry. In Australia, pet food and related industry workers more than thirty thousands create 6% of gross domestic product (Tianfei, 2011).

The end of last century, along with the deepening of reform and opening up, people's living standard gradually improve, the pursuit of spiritual life had a higher level, pet concept emerging in China, make the pet food and related industry begun to take shape. Coupled with foreign pet food companies targeting this piece of virgin land to be exploited, International brand enterprise in China in succession, through different channels into Chinese line of sight, this led to a domestic brand new concept of pet food. Despite all those foreign companies with a grab the mindset of the Chinese currency, but enlightenment to the growth and development of the pet food in China.

In the 21st century, with the deepening of the internationalization process, let the Chinese change blew in the face of pet food and strangeness. At an annual rate as high as 30% ~ 50% of the development of the fast-growing. According to statistics, when a country's per capita GDP in \$3000 to \$8000, pet food and related industry will be rapidly developed. And the current China, have quite a few cities reached this level. Beijing, Shanghai, Guangzhou and other cities, the pet industry has been fairly developed, with Beijing as an example: at 2001, the per capita GDP reached \$3000 for the first time, in 2008, the per capita GDP break through \$9000. China's per capita GDP is a record high of \$3381 (Insight, 2013). Under the stimulus of strong economic growth, domestic pet food market and related industry has also been an unprecedented prosperity.

The one-child policy; family size reduction; and the increase of aging population, In order to release the pressure, eliminate loneliness, feeding pets has become one of the people's preferred choices, in all kinds of pets, dogs and cats are treated as family members or friends live with people.

According to the statistical data of Euromonitor, volume growth 2008-2013 of dog and cat food total 37.6% (APPENDICE A), value growth 2008-2013 of dog and cat food total 60.8% (APPENDICE B). Thus, today's Chinese pet owners who want to be able to through scientific breeding method, to choose the appropriate pet food for their pets, make their pets can have a healthy body and a longer life, and most of the pet owners live a fast-paced way of life, without too much time "cooking" for their pet, also believe that the pet food is convenient and health, the pet owners rely pet food more and more high.

Due to China has not yet been formulated relevant provisions on the pet food production security and sales, lead to the existing domestic pet food quality is uneven. In addition, the pet foods are different from pet clothes, consumers' perception of the brand is very high. Most owners look for only a few famous international brands, but for the Chinese domestic brands do not trust. Due to the international brand price is higher than the price of domestic brands, so consumers must pay the higher cost of pet food.

## 2. Objectives

- (1) To identify the demographic factors influencing consumer behavior.
- (2) To identify the marketing stimuli influencing consumer behavior.
- (3) To identify the environmental stimuli influencing consumer behavior.
- (4) To identify the buyer characteristics influencing consumer behavior.
- (5) To identify the buyer decision process influencing consumer behavior.

## 3. Literature review

### 3.1 Demographic profiles

Demographics are the vital description of population distribution in population statistics. Marketers make use a variety of demographic characteristics include gender, age, income, education, occupation, religion, race, and social class. There are very important for marketers, there are closely related to the demand for many products, The consumer needs, wants, usage rates, and brand preferences are often associated with demographic variables (Etzel, Walker, & Stanton, 2006).

### 3.2 Marketing Mix

Marketing mix concept was first introduced in 1950 by Neil Borden. And became known as 4p (Gronroos, 1997). The marketing program consists of numerous decisions on value-enhancing marketing activities to use. Marketing activities come in all forms. One traditional depiction of marketing activities is in terms of the marketing mix, which has been defined as the set of tools into four broad groups, which is called the four Ps: product, price, place, and promotion. Marketing mix decisions must be made for influencing the trade channels as well as the final consumers. The four Ps represent the seller's view of the marketing tools available for influencing buyers. From a buyer's point of view, each marketing tool is designed to deliver a customer benefit (Kotler & Keller, 2006). Marketing plan decisions about product, price, promotion and distribution is formed. These are the most important part which to achieve sales targets and profitability m (Goldsmith, 1999).

### 3.3 Consumer behavior

Consumer behavior is a process which to understand how consumers select, buy and dispose of goods, services, ideas or experiences in order to satisfy their needs and wants (Kotler and Keller 2006). Consumer behavior is a complex process involving the activities people engage in when seeking for, choosing, buying, using, evaluating and disposing of products and services with the goal of satisfying needs, wants and desires (Belch, 2004). Consumers make many buying decisions every day. Most large company's research, consumer buying decisions in great detail to answer questions about what consumer buy, where they buy, how and how much they buy, when they buy, and why they buy (Kotler and Armstrong, 2001).

### 3.4 Social

A consumer's behavior is influenced by such social factors as reference groups, family, and social roles and statuses. Reference groups consist of all of the groups that have a direct (face-to-face) or indirect influence on a person's attitudes or behavior. Groups that have a direct influence on a person are called membership groups. Some primary membership groups are family, friends, neighbors, and co-workers, with whom individuals interact fairly continuously and informally. Secondary groups, such as professional and trade-union groups, tend to be more formal and require less continuous interaction. Reference groups expose people to new behaviors and lifestyles, influence attitudes and self-concept, and create pressures for conformity that may affect product and brand choices. People are also influenced by groups to which they do not belong. Aspirational groups are those the person hopes to join; dissociative groups are those whose values or behavior an individual rejects (Kotler, 2003).

3.5 Economic

The buying tendency of a buyer is always directly related to the economic situation or income of a buyer. Any individual who has a higher level of disposable income will buy expensive and premium products than compared to people having middle or lower level income. Therefore, the economic situation is an important factor that affects the purchasing decision of a buyer. The economic situation is the purchasing power of a consumer which has a positive relationship with his/her personal spending. Marketers, therefore, target consumers who have lots of money and resources, charging prices to the match. On the other hand, some marketers target consumers with more modest means (Kotler et al., 2008, p. 252).

3.6 Attitudes

Attitude is a favorable or unfavorable behavior towards an object, an event or a situation (Botha et al. 1997); are the desirable or undesirable evaluations that people make of particular behaviors (Ajzen, 1991). Attitudes put us into a frame of mind: liking or disliking an object, moving toward or away from it. Lead us to behave in a fairly consistent way toward similar objects. Because attitudes economize on energy and thought, it can be very difficult to change (Kotler, 2003).

3.7 Personality

Personality is usually described in terms of such traits as self-confidence, dominance, autonomy, deference, sociability, defensiveness, and adaptability (Kotler & Keller, 2006). Each person has a distinct personality that influences buying behavior. Personality refers to the distinguishing psychological characteristics that lead to relatively consistent and enduring responses to the environment. Allport (1937) described personality as “the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment” (p. 48), and Hogan (1987) referred to it as patterns of thought, feelings, and behavior that are expressed in different circumstances. Personality traits are considered to be enduring, which means they result in stable and cross-situational individual differences (Allport1937; Wang & Yang, 2007).

3.8 Motivation

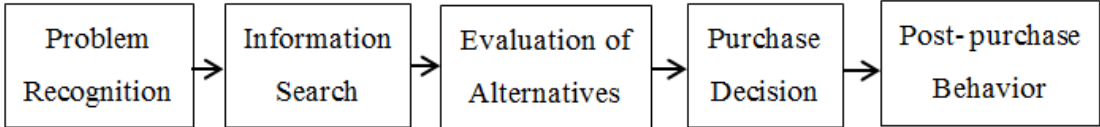
Motivation refers to the processes that energize and direct purposeful behavior (Hebb, 1955). Motivation is the process by which consumers are driven or moved to satisfy a particular need (Sheth, Mittal, and Newman, 1999). A person has many needs at any given time. Some needs are biogenic; they arise from physiological states of tension, such as hunger, thirst, discomfort. Other needs are psychogenic; they arise from psychological states of tension, such as the need for recognition, esteem, or belonging. A need becomes a motive when it is aroused to a sufficient level of intensity. A motive is a need that is sufficiently pressing to drive the person to act (Kassarjian, and Robertson, 1981; Kotler 2003).

3.9 Buyer decision process

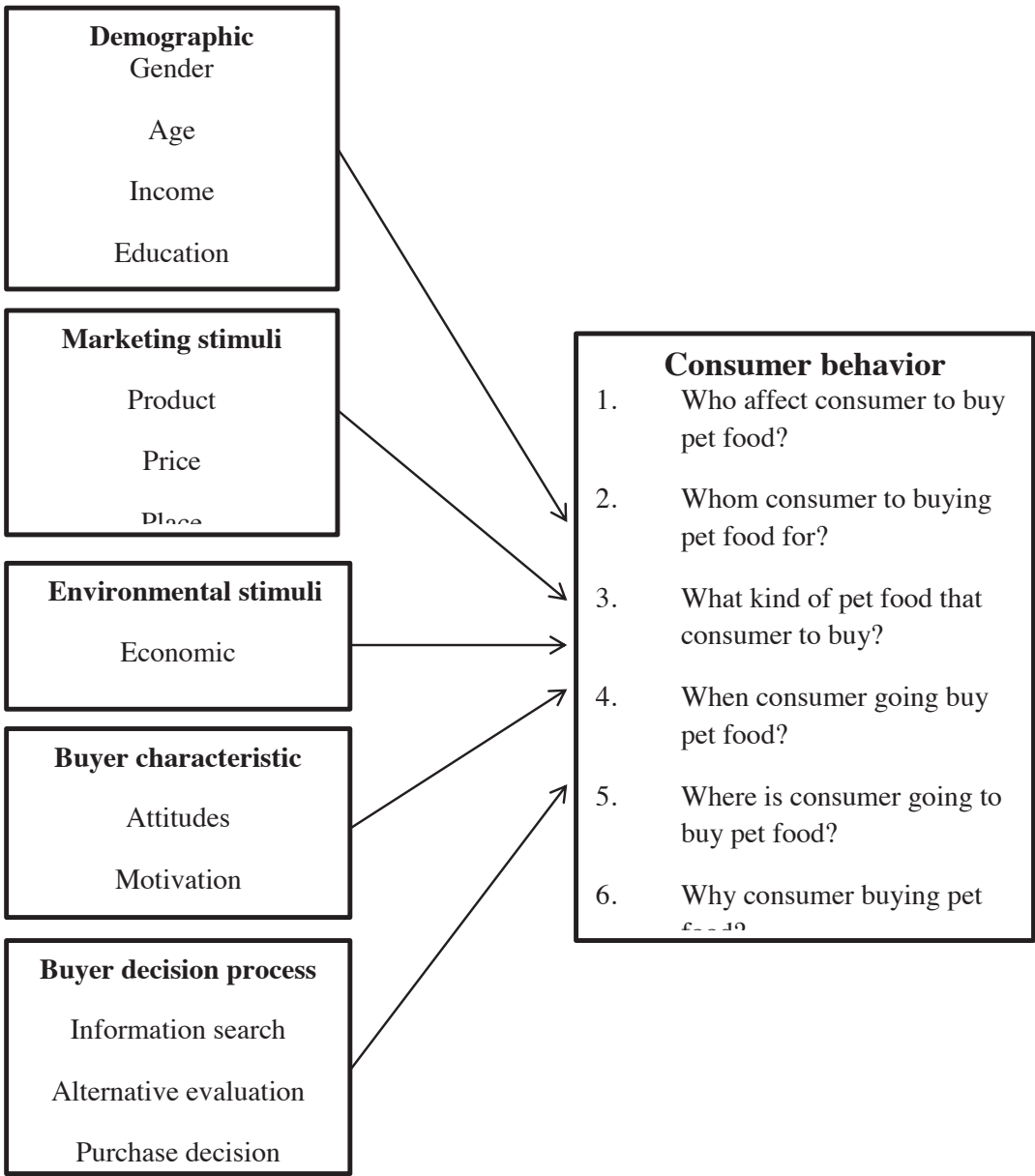
Consumer decision-making is a multiple-stage process (Bettman 1979; De Bruyn and Lilien, 2008; Lavidge and Steiner, 1961). The consumer decision making process model represents a road map of consumer's minds that markets and managers can use to help and to guide for product mix, communications and sales strategies. There are five stages when making decisions: needs recognition, search information, pre-purchase evaluations, consumption and post-consumption evaluation (Blackwell et al., 2001).

Consumers don’t always pass through all five stages - they may skip or reverse some. The model in Figure 1 provides a good frame of reference, however, because it captures the full range of considerations that arise when a consumer faces a highly involving new purchase (Putsis Jr and Srinivasa 1994).

Figure 1: Five-Stage Model of the Consumer Buying Process



4. Conceptual Framework





5. Methodology

5.1 Research Design

The study used quantitative research method of collecting primary data according to the objectives of the study, and the purpose of this research is to identify factors influencing Chinese consumer behavior on buying pet food in China. The research used questionnaire (Closed-End Questions) which was originally created in the English language, it was translated into the Chinese language for the purpose of the survey. In order to conduct the research, the information was collected from Chinese consumers who buying pet food.

5.2 Data Collection

The data and information collected by primary data method by using the questionnaire which was designed in Chinese language for Chinese respondents in order to ensure the reliability and validity of the research instrument. The questionnaire was directly distributed and collected the data of questionnaires through the online survey platform, also directly sending the link of the questionnaire and the QR code of questionnaires to the social network, especially pets social network via the internet and social group especially pet social group via mobile phone. There are 385 respondents as the sample size, which according to Suzie Sangren (1999) to calculate.

5.3 Data Measurement and Analysis

In the research, the responses of part1 were using nominal scale and ordinal scales to measure the data in the questionnaire; the responses of part2 to part6 were limited to rating on a five-point Likert scale to measure the degree of agreement with the statements in the questionnaire ranked from (1) strongly disagree to (5) strongly agree.

The researcher analyzes data variables from questionnaire were processed by Statistical program for the result. Using the descriptive statistic (Frequency and Percentage) to describe the data of part 1 - demographic factors. Using the descriptive statistic (Mean and Standard Deviation) to analyze the data of part 2 - marketing stimuli; part 3 - environmental stimuli; part 4 - buyer characteristics; part 5 - buyer decision process and part 6 - consumer behavior. The One-Way ANOVA was employed to test the hypothesis regarding the relationship between the variables of demographic and variables of dependents. The Multiple Regression was employed to test hypotheses regarding the relationship between the variables of marketing stimuli, environmental stimuli, buyer characteristics, buyer decision process and variety of dependent.

6. Results

6.1 Hypothesis Testing

6.1.1 Hypothesis 1: Demographic factors influencing consumer behavior on buying pet food.

Table 1: The results of One-Way ANOVA on relationship between gender and consumer behavior

Consumer behavior	Demographic									
	Gender		Age		Income		Education		Occupation	
	Sig.	Result	Sig.	Result	Sig.	Result	Sig.	Result	Sig.	Result
Who affect consumer to buy pet food?	0.316	Reject	0.549	Reject	0.126	Reject	0.631	Reject	0.150	Reject
Whom consumer to buying pet food for?	0.675	Reject	0.041	Accept	0.007	Accept	0.006	Accept	0.000	Accept
What kind of pet food that consumer to buy?	0.751	Reject	0.831	Reject	0.010	Accept	0.049	Accept	0.180	Reject
When consumer going buy pet food?	0.675	Reject	0.551	Reject	0.000	Accept	0.045	Accept	0.034	Accept
Where consumer goes to buy pet food?	0.216	Reject	0.974	Reject	0.019	Accept	0.168	Reject	0.279	Reject
Why consumer buying pet food?	0.865	Reject	0.101	Reject	0.062	Reject	0.001	Accept	0.000	Accept
How to buy pet food?	0.455	Reject	0.148	Reject	0.038	Accept	0.110	Reject	0.033	Accept

Hypothesis 1 state demographic has related to consumer behavior on buying pet food. According to table 1 shows the results of One-Way ANOVA on the relationship between demographic and consumer behavior. Gender has no relation with consumer behavior on buying pet food; Age has relation with “whom” consumer to buying pet food for, which Sig. Equal 0.041; Income has relation with consumer behavior except “who” affect consumer to buying pet food with Sig. Equal 0.126 and “why” consumer buying pet food, which Sig. Equal 0.062; Education has relation with consumer behavior except “who” affect consumer to buying pet food with Sig. Equal 0.631, “where” consumer goes to buy pet food which Sig. Equal 0.168 and “how” to buy pet food which Sig. Equal 0.110; Occupation has relation with consumer behavior except “who” affect consumer to buying pet food with Sig. Equal 0.150, “what” kind of pet food that consumer to buy which Sig. Equal 0.180 and “where” consumer goes to buy pet food which Sig. Equal 0.279.

6.1.2 Hypothesis 2: Marketing stimuli influencing consumer behavior on buying pet food.

6.1.3 Hypothesis3: Environmental stimuli influencing consumer behavior on buying pet food.

6.1.4 Hypothesis 4: Buyer characteristics influencing consumer behavior on buying pet food.

6.1.5 Hypothesis 5: Buyer decision process influencing consumer behavior on buyingpet food.

Table 2: Results of Multiple Regression for the Relationship between Marketing stimuli; Environmental stimuli; Buyer characteristic; Buyer decision process and “who” affect consumer to buying pet food

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.153	0.398		0.385	0.701
Marketing stimuli	0.405	0.145	0.184	2.781	0.006
Environmental stimulus	0.146	0.104	0.083	1.394	0.164
Buyer characteristics	-0.225	0.101	-0.134	-2.226	0.027
Buyer decision process	0.541	0.132	0.264	4.109	0.000

R = 0.386<sup>a</sup> R<sup>2</sup> = 0.149 Adjusted R Square = 0.140 F = 16.676 Sig. = 0.000<sup>a</sup>

**Table 3:** Results of Multiple Regression for the Relationship between Marketing stimuli; Environmental stimuli; Buyer characteristic; Buyer decision process and “whom” consumer to buying pet food for

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.051	0.347		-0.146	0.884
Marketing stimuli	0.613	0.127	0.289	4.826	0.000
Environmental stimulus	-0.163	0.091	0-.097	-1.793	0.074
Buyer characteristics	-0.024	0.088	-0.015	-0.275	0.784
Buyer decision process	0.768	0.115	0.389	6.685	0.000

R = 0.548<sup>a</sup> R<sup>2</sup> = 0.300 Adjusted R Square = 0.293 F = 40.761 Sig. = 0.000<sup>a</sup>

**Table 4:** Results of Multiple Regression for the Relationship between Marketing stimuli; Environmental stimuli; Buyer characteristic; Buyer decision process and “what” kind of pet food that consumer to buy

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.052	0.326		-0.160	0.873
Marketing stimuli	0.531	0.119	0.270	4.448	0.000
Environmental stimulus	0.082	0.086	0.053	0.956	0.339
Buyer characteristics	-0.321	0.083	-0.214	-3.868	0.000
Buyer decision process	0.730	0.108	0.399	6.751	0.000

R = 0.529<sup>a</sup> R<sup>2</sup> = 0.279 Adjusted R Square = 0.272 F = 36.823 Sig. = 0.000<sup>a</sup>

**Table 5:** Results of Multiple Regression for the Relationship between Marketing stimuli; Environmental stimuli; Buyer characteristic; Buyer decision process and “when” consumer going buy pet food

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.540	0.336		1.609	0.109
Marketing stimuli	0.106	0.123	0.053	0.860	0.390
Environmental stimulus	0.283	0.088	0.179	3.210	0.001
Buyer characteristics	-0.427	0.085	-0.282	-5.011	0.000
Buyer decision process	0.894	0.111	0.482	8.045	0.000

R = 0.508<sup>a</sup> R<sup>2</sup> = 0.258 Adjusted R Square = 0.250 F = 33.018 Sig. = 0.000<sup>a</sup>

**Table 6:** Results of Multiple Regression for the Relationship between Marketing stimuli; Environmental stimuli; Buyer characteristic; Buyer decision process and “where” is consumer go to buy pet food

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.316	0.415		0.763	0.446
Marketing stimuli	-0.298	0.152	-0.127	-1.963	0.050
Environmental stimulus	0.183	0.109	0.099	1.683	0.093
Buyer characteristics	0.384	0.105	0.215	3.649	0.000
Buyer decision process	0.620	0.137	0.284	4.511	0.000

R = 0.426<sup>a</sup> R<sup>2</sup> = 0.182 Adjusted R Square = 0.173 F = 21.109 Sig. = 0.000<sup>a</sup>

**Table 7:** Results of Multiple Regression for the Relationship between Marketing stimuli; Environmental stimuli; Buyer characteristic; Buyer decision process and “why” consumer buying pet food

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.150	0.318		0.472	0.638
Marketing stimuli	0.344	0.116	0.175	2.950	0.003
Environmental stimulus	-0.014	0.084	-0.009	-0.170	0.865
Buyer characteristics	0.087	0.081	0.058	1.070	0.285
Buyer decision process	0.734	0.105	0.402	6.957	0.000

R = 0.557<sup>a</sup> R<sup>2</sup> = 0.311 Adjusted R Square = 0.303 F = 42.830 Sig. = 0.000<sup>a</sup>

**Table 8:** Results of Multiple Regression for the Relationship between Marketing stimuli; Environmental stimuli; Buyer characteristic; Buyer decision process and “how” to buy pet food

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.671	0.427		1.573	0.117
Marketing stimuli	0.153	0.156	0.064	0.980	0.328
Environmental stimulus	-0.233	0.112	-0.124	-2.081	0.038
Buyer characteristics	0.250	0.108	0.139	2.312	0.021
Buyer decision process	0.687	0.141	0.311	4.864	0.000

R = 0.395<sup>a</sup> R<sup>2</sup> = 0.156 Adjusted R Square = 0.147 F = 17.540 Sig. = 0.000<sup>a</sup>

According to table 2 to table 8 shows the results of Multiple Regression for the Relationship between Marketing stimuli, Environmental stimuli, Buyer characteristic, Buyer's decision process and consumer behavior:

Marketing stimuli (Sig. is 0.006), Buyer characteristics (Sig. is 0.027), and Buyer decision process (Sig. is 0.000) has relation with “who” affect consumer to buy the pet food, Environmental stimulus (Sig. is 0.164) has no relation with “who” affect consumer to buy the pet food. (Table 2)

Marketing stimuli (Sig. is 0.000), and Buyer decision process (Sig. is 0.000) has relation with “whom” consumer to buy the pet food for. Environmental stimulus (Sig. is 0.074), and Buyer characteristics (Sig. is 0.784), has no relation with “whom” consumer to buy the pet food for. (Table 3)

Marketing stimuli (Sig. is 0.000), Buyer characteristics (Sig. is 0.000), and Buyer decision process (Sig. is 0.000) has relation with “what” kind of pet food that consumer to buy. Environmental stimulus (Sig. is 0.339) has no relation with “what” kind of pet food that consumer to buy. (Table 4)

Environmental stimulus (Sig. is 0.001), Buyer characteristics (Sig. is 0.000), and Buyer decision process (Sig. is 0.000) has relation with “when” consumer go to buy pet food. Marketing stimuli (Sig. is 0.390), has no relation with “when” consumer go to buy pet food. (Table 5)

Marketing stimuli (Sig. is 0.050), Buyer characteristics (Sig. is 0.000 w), and Buyer decision process (Sig. is 0.000) has relation with “where” is consumer go to buy pet food. Environmental stimulus (Sig. is 0.339) has no relation with “where” is consumer go to buy pet food. (Table 6)

Marketing stimuli (Sig. is 0.003), and Buyer decision process (Sig. is 0.000) has relation with “why” consumer buying pet food. Environmental stimulus (Sig. is 0.865), and Buyer characteristics (Sig. is 0.285) has no relation with “why” consumer buying pet food. (Table 7)

Environmental stimulus (Sig. is 0.038), Buyer characteristics (Sig. is 0.021), and Buyer decision process (Sig. is 0.000), has relation with consumer “how” to buy pet food. Marketing stimuli (Sig. is 0.328) has no relation with consumer “how” to buy the pet food. (Table 8)

## 7. Discussion

This research focused on the factors influencing consumer behavior on buying pet food based on the black box model by Sandhusen (2000).

Gender and age does not influence on consumers to purchase pet food. However, Income is a major factor in people’s ability to purchase (Capon and Hulbert, 2001). Income leads to differences in purchasing power (Hawkins, Best, and Coney, 2001); income has a relationship with “whom” consumer to buy the pet food for, “what” kind of pet food that consumer to buy, “when” consumer go to buy pet food, “where” consumer to buy the pet

food, and “how” to buy pet food. The occupation has a relationship with “whom” consumer to buy the pet food for, “when” go to buy, “why” go to buy and “how” to buy the pet food. This finding is supported to a person’s occupation affects the consumer to buying goods and services (Jain, 2010). The nature of the job of a buyer has direct influence on the products and brands that consumer choices for.

Consumers buying pet food behavior, more or less will be affected by others, because the majority of consumers to buy pet food for their own pet, so they choose the kind of food, food quality, and brand awareness seems to be very careful, they want to let their pet have a healthy body. These findings are supported to Kotler (2003) marketing stimuli (product, price, place and promotion) influencing on consumer behavior (“who” affect consumer to buy pet food; “whom” consumer to buy pet food for; “what” kind of pet food that consumer to buy; “where” is consumer going to buy pet food; “why” consumer buying pet food).

Environmental stimuli only have relationships with “when” consumer buying pet food; and “how” to buy pet food. That means environmental has no obvious influence on consumer behavior, either inflation or deflation, consumer also buying pet food for their pet; Share purchase experience from others doesn't affect consumer behavior on buying pet food.

According to Krech et al., (1962) personality, motivation and attitudes are as important as beliefs for influencing consumer buying behavior. Researcher found that personality, motivation and attitudes influencing on consumer behavior on buying pet food (“who” affect consumer to buying pet food; “what” kind of pet food that consumer to buy; “when” consumer buying pet food; “where” is consumer go to buy pet food; “how” to buy pet food). That means some consumers will be easily affected by others’ suggestion to buy pet food, or change to buy the pet food category or brand, also due to the different time or place, they deem the pet food packaging to attract their attention, or pet food looks delicious, imagining their pet love to eat, also will choose to buy.

In many consumer behavior studies, the classic view of consumer behavior principle is the consumer decision-making process (Solomon, 2009). In this study, the four stages (information search, alternatives evaluation, purchase decision and post-purchase) have relationship with consumer behavior on buying pet food (“who” affect consumer to buying pet food; “whom” consumer to buying pet food for; “what” kind of pet food that consumer to buy; “when” consumer buying pet food; “where” is consumer go to buy pet food; “why” consumer buying pet food; “how” to buy pet food). That means before buying pet food, Chinese consumer searching information about pet food and through a variety of information channels to get the information of pet food, then to evaluate the pet food such as quality, brand to prepare for the purchase and purchasing behavior and after purchasing behavior, all have an impact on consumer behavior on buying pet food in China.

## 8. Implication for Business

Pet owners are becoming younger in average age, a stable job or fixed income, pet owner or pet food buyer believes that the pet food which import brand is preferred, although these pet food prices of imported brand are higher, but they consider that it can help their pet healthier, they willing to spend more money to buy the imported pet food which better quality, and have high popularity.



From the perspective of a domestic pet food company in China, compete with many international well-known pet food companies in China's pet food market, no matter in such aspects as financing, brand building, and the quality of the products, should be to the success of international well-known brands as the reference standard. First of all, pet food company should improve the quality of pet food, let consumers rest assured products. Second, pet food company can according to different types of pet, to the design and production of different texture and properties of pet food, let the pet love it, cultivate consumer brand loyalty. Third, attach importance to brand building, in the same quality products, let consumer spending behavior from product consumption to brand consumption. Fourth, cooperate with pet food stores, pet hospital, supermarkets, in terms of product, for product publicity and promotion activities. Fifth, use unconventional marketing channels---web marketing, direct sales pet food to consumers through the company's website (B to C). Sixth, consider different levels on the pricing, consumer characteristic, in order to achieve consumers.

## 9. Limitations

The limitation is due to the respondents must be the pet (dog or/ and cat) owners who have experience of purchase pet (dog or/ and cat) food, or must be the Chinese people who have experience of purchase pet (dog or/ and cat) food. All pet owners or Chinese consumer who was buying pet food, not everyone feed a dog or a cat. Therefore, increases the difficulty to collect the primary data.

Time and cost constraints are the major limitations. In this study, in order to speed up the valid questionnaires collected, the researcher sent the QR code and link of the questionnaire to the Chinese pet social network, and pet lovers' private groups through the internet and mobile phones and try to let the pet foods' buyers to fill in a questionnaire in every region. However, China is a large country, although the IP address of the questionnaire showed that respondents to fill in the questionnaire in different cities, but really can not let every respondent from different cities to fill in the questionnaire.

## 10. Further Research

In this study, the researcher focused on dog and cat food in the solid food, wet food, and snacks. Nowadays, pet food, or either dog and cat food does not only 3 categories. According to the morphology of pet food, divided into solid food, leisure snacks, pet canned food, pet liquid food, such as: pet pate, pet nutrition porridge and so on. According to the pet food purposes Pet food it is divided into: pet diet, diet partner, pet health care food, pet snacks, and pet prescription and so on. Therefore, the future, researchers should focus more pet food categories to analyze Chinese consumer behavior on buying pet food in China.

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## **FAMILY - OWNED MANAGEMENT AND FIRM PERFORMANCE: EVIDENCE FROM PUBLIC COMPANY IN THAILAND**

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## **Abstract**

The objective of this study is to assess the profitability of family business companies listed in the Stock Exchange of Thailand (SET). Family business is defined as meeting the criteria of 1) under the control of the founding family, 2) at least one of the top 5 directors being members(s) of the family, and 3) member(s) of the family (all together) holding significant proportion of the shares to become strategic shareholder. Based on independent sample t-test, it is found that companies with Chief Executive Officers (CEO) being family members exhibit higher Gross Profit Margin, Net Profit Margin and Return on Asset compared to those with non-family member CEOs at statistically significant level of .05; while the comparison indicate no difference on Return on Equity.

**Keywords:** Family Business, Firm Performance, Profitability, Public Company in Thailand

## **1. Introduction**

Facing the rapidly changing economic environment, the owners of family business have to be ready and respond promptly to the challenges in order to survive and expand sustainably in the midst of currently changing playing field of commerce at global and regional levels. Asian family businesses contribute significantly to the regional economic success as more than 60% of companies are managed by owner families. They are better than non-family managed companies with respect to commitment, unity of goals and missions, and long-run perspective. However, family tension could arise and there could be insufficient time for the new generation to take over the management (EIU, 2014). The succession issue of family business has been a complex and time-consuming task for most family businesses as they have to deal with various external uncertainties (customers, competitors, supplies, etc.) impacting on the business both short-term and long-term (PWC US, 2105). At present, most of companies in the Southeast Asian countries are still under the management of founding family members. The first succession to the next generation is going to take place, and how this could be achieved with the best outcome to the business is interesting to investigate. The Economic Intelligence Unit (EIU) made a survey of family businesses and found that 52% of family businesses appointed family-members as CEOs, and for the group of large companies with sales of 10,000 million dollars upward, the corresponding proportion are 75% (EIU, 2014).

It is increasingly important to understand the difference between ownership and management. Several family businesses undertake plan to recruit non-family members to the position of CEOs while maintain control of the businesses. This is a demonstration of the strong desire of the family to keep control of the business because the success of business is closely related to the ability of family members and the management of non-family members on the basis of self-determination in making decision promptly and flexibly to deal with external challenges constantly threatening the business. According to the studies of European Family Businesses (EFB) and KPMG, the ability to maintain control of the business is one of the three most important factors contributing to the success of family businesses. Recognizing the need for expert knowledge and competence of non-family member professional executives to shape future success of the business, the owners are still reluctant to give up the control of the businesses (KMPG, 2014).

Family business succession is an important stage of the life cycle of family business. A misstep in such a succession could lead to inopportune business outcome. Some study has found that the succession of CEO to non-family member has negative impact on the business. However, several companies hold the view that business operation would be more transparent if the succeeding CEO has no relation with the family (Bennedsen, Nielsen and Perez-Gonzalez, 2010). The problem is the consequences of complexities in the succession process involving planning, determination of appropriate timing, selection of successor, and relations of family members (Credit Suisse, 2012). An important risk of relying on non-family member CEO is the loss of privacy and confidential financial information of owners or directors. Another risk is that non-family member CEO has to be informed of family confidential information regarding family member(s) working in the company that need to be kept with high compensation package. If such CEO does not have full power and authority, he/she would have to bear the pressure and unable to challenge the owner (Brown, n.d.).

There has been several debate of the performance of family-member CEO and non-family member CEO. Maury (2008) indicates that family control is related to higher company valuation based on financial ratios. On the other hand, Smith and Amoako-Adu (1999) finds that companies with long-term vision would be able to achieve statistically significant higher return on asset if they are managed by non-family members compared to those managed by family member. Brown and Caylor (2009) also finds that firms with non-family member CEOs or board would be positively related to the return on asset and positively related to operation outcomes. The contrasting findings of the literature are partly due to the differences of the definition of family business. It would be interesting to investigate if there are any other factors relating to such differences for listed family business companies in the SET.

The operational performance of family business could be measured by various means one of which is the financial performance. In the case of listed companies, the Stock Market Performance could be measured with several indicators such as Tobin's Q, Return on Equity, or Return on Asset (Jaskiewicz, 2006). There are two approaches to measure the financial performance of firms, one is based on accounting value and the other is based on market value. The use of accounting value can be compiled through many years back and the data are available for longer periods and more comprehensive. (Nicholson and Kiel, 2003). These accounting measures include profitability ratios such as Return on Asset, Return on Equity, or Return on Sales, and several other financial ratios.

Based on the criteria of family business set out by the Family Business Center, University of the Thai Chamber of Commerce, family business firms account for 46.91 percent of listed companies in SET with market capitalization of 5,315,551.89 million Baht in 2014 (SET, 2014). The data from SETSMART (2015) found 78.6% of family business firms listed in the SET have family-member CEO. It is apparent that this information has not been utilized in any study for a better understanding of family business. The Family Business Center, the University of the Thai Chamber of Commerce considers this issue of profitability of listed family business firms in the SET worth a close examination. The main point would be the contrast of profitability between that of firms with family-member CEOs (or Family CEO) and that with non-family member CEOs (Non-family CEO). The analytical variables for measuring profitability are Gross Profit Margin, Net Profit Margin, Return on Asset and Return on Equity. The study period covers 2004-2013.

## 2. Hypothesis

In this study the hypotheses were made as follows:

H<sub>1</sub> : There is difference between Gross Profit Margin of Family CEO firm and Non-Family CEO firm.

H<sub>2</sub> : There is difference between Net Profit Margin of Family CEO firm and Non-Family CEO firm.

H<sub>3</sub> : There is difference between Return on Asset of Family CEO firm and Non-Family CEO firm.

H<sub>4</sub> : There is difference between Return on Equity of Family CEO firm and Non-Family CEO firm.

## 3. Measurement of Profitability

### 3.1 Selection of Sample and Data

Based on the chosen definition, the research team found 243 listed firms satisfying the criteria of family business, but only 234 firms have complete data for analysis. Of these 184 firms are Family CEOs and 50 are Non-Family CEO.

The criteria for determining whether a firm is a family firm are mainly involved the control of the firm by a family, and according to the definition of "Family Business" given by the Family Business Center, UTCC are as follows:

- 1) being the founding Family
- 2) at least one of the top 5 directors being members(s) of the family, and
- 3) member(s) of the family (all together) holding significant proportion of the shares to become strategic shareholder

Note: Strategic shareholders, or "control of business" according to the Security Exchange Commission (SEC) means (1) the holding more than 50 percent of the total voting rights in a given firm, or (2) the power to control the majority votes at the shareholder meeting of a firm whether directly or indirectly or by any other means or (3) the authority/power to appoint or remove at least half of the directors whether directly or indirectly.



The data set for analysis are obtain from SETSMART database of the Stock Exchange of Thailand (2015) on Gross Profit Margin, Net Profit Margin, Return on Asset, and Return on Equity of the sample firms during 2004-2013 (as at 30 January 2015)

3.2 Variables for Measuring Profitability

This comparative study of profitability of family business firms employs four variables, the definition and formula of which according to the SET (2013) are described below:

3.2.1 Gross Profit Margin

Gross profit margin is the contrast of profit with sales calculated as percentage of sales in order to measure the ability of firm to control cost of goods sold, inventory and ability to mark up the cost in its price.

$$\frac{(\text{Sales} - \text{Cost of Goods Sold}) \times 100}{\text{Sales}}$$

3.2.2 Net Profit Margin

Net profit margin measures the profitability of the firm taking sales minus all expenses (including interests, special items outside normal operation and income tax) as percentage of sales.

$$\frac{\text{Net Profit (Loss)} \times 100}{\text{Sales}}$$

3.2.3 Return on Asset (ROA)

- For firms in manufacturing and service sectors.

$$\frac{\text{Profit (Loss) before interest and income tax} \times 100}{\text{Total Asset (average)}}$$

- For firms in other sectors.

$$\frac{\text{Profit (Loss) before tax} \times 100}{\text{Total Asset (average)}}$$

3.2.4 Return on Equity (ROE)

This ratio is used to calculate the percentage of return on the shareholder equity, it would indicate the ability of the management in providing return to the shareholders/ owners.

$$\frac{\text{Net Profit (Loss)} \times 100}{\text{Shareholder Equity (average)}}$$

The data were analyzed statistically using independent sample t-test for any differences between the two groups.

4. Results

The results of data analysis comparing profitability of 184 Family CEO firms and 50 Non-Family CEO firms listed in the SET are given below:

4.1 Profitability of Firms During 2004-2013

The profitability measured by the means of the four variables of Gross Profit Margin, Net Profit Margin, Return on Asset and Return on Equity (as shown in Table 1) for the Family CEO group are higher than the Non-Family CEO group.

Table 1: Profitability variables of Family CEO group compared to those of Non-Family CEO group during 2004-2013

Year (A.D.)	Family CEO				Non- Family CEO			
	Gross Profit Margin (%)	Net Profit Margin (%)	Return on Asset (%)	Return on Equity (%)	Gross Profit Margin (%)	Net Profit Margin (%)	Return on Asset (%)	Return on Equity (%)
2004	23.363	33.375	9.201	18.642	18.420	4.279	6.018	3.452
2005	21.790	8.097	8.414	10.783	17.744	6.756	5.322	4.686
2006	23.320	5.474	9.139	10.808	17.159	4.540	4.625	9.317
2007	23.270	3.105	8.013	7.468	16.025	2.158	5.499	7.036
2008	23.588	17.640	7.893	6.806	16.025	-0.598	1.932	0.477
2009	21.959	2.194	7.351	7.904	15.515	1.151	4.088	3.413
2010	23.232	5.657	9.069	10.893	19.035	8.218	4.892	12.728
2011	23.231	5.630	9.191	10.363	19.388	5.601	2.374	-2.939
2012	23.465	6.236	9.812	2.406	16.691	4.302	-1.833	5.463
2013	24.359	7.068	8.642	6.135	17.697	6.007	5.564	7.495
Mean	23.347	8.916	9.195	9.392	17.517	4.718	4.097	4.957

4.2 Test of Difference of Profitability between Family CEO Firms and Non-Family CEO Firms.

Applying the independent sample t-test on the two groups of data provides the statistics as shown in Table 2, indicating that:

Gross profit margin of Family CEO firm would be higher than that of Non-Family CEO firm at statistically significant level of .05.

Net profit margin of Family CEO firm would be higher than that of Non-Family CEO firm at statistically significant level of .05.

Return on Asset of Family CEO firm would be higher than that of Non-Family CEO firm at statistically significant level of .05.

Return on Equity of Family CEO firm would not be higher than that of Non-Family CEO firm at statistically significant level of .05.

**Table 2:** Independent sample t-test of Family CEO Firms versus Non-Family CEO Firms.

Variables	n	Mean	SD	t	df	sig
Gross Profit Margin						
Family CEO	175	23.347	14.673	2.303	213	.011*
Non-Family CEO	40	17.517	13.371			
Net Profit Margin						
Family CEO	183	8.916	16.146	1.717	230	.044*
Non-Family CEO	49	4.718	10.900			
Return on Asset						
Family CEO	184	9.195	8.261	3.077	232	.001*
Non-Family CEO	50	4.097	16.003			
Return on Equity						
Family CEO	184	9.392	22.199	1.263	231	.104
Non-Family CEO	49	4.957	20.423			

Note: \*= significant level of .05

**5. Conclusion and Discussion**

The results of this study indicate that at statistically significant level of .05 the Gross Profit Margin, Net Profit Margin, and the Return on Asset of Family CEO firm would be higher than those of Non-Family CEO firm, while there would not be any difference on the Return on Equity. Overall, the results are consistent with the hypotheses that there is difference between Gross Profit Margin of Family CEO firm and Non-Family CEO firm, there is difference between Net Profit Margin of Family CEO firm and Non-Family CEO firm, and there is difference between Return on Asset of Family CEO firm and Non-Family CEO firm.

This is consistent with Özer (2012) finding that Family CEO firm could achieve higher Return on Asset as the CEO is more willing to invest in the future of the company while the Non-Family CEO firms would be successful in Debt/Total Asset ratio as the consequence of greater care in incurring debt. In another study in the U.S. Anderson and Reeb (2002) found the Return on Asset of Family CEO firms to be higher than that of Non-Family CEO, in line with Amran’s (2012) conclusion that Family CEO would contribute to better financial performance of firm compared to Non-Family CEO and CEO of successor generation could achieve high firm value than the founding CEO. Most of family firms would appoint family member as CEO because such a person would have strong family values and culture, enhance family unity and high spirit of ownership. On the other hand Pérez-González (2001) pointed out that firm appointing family member who did not acquire formal education in prestigious institution as CEO would have a tendency to perform poorer and that Non-Family CEO firm have higher sales and assets while the return on asset would be lower. In another study Maury (2006) concluded that family control of the firm would be related to higher valuation of firms as measured by financial ratios.

Several management experts also pointed out that firms managed by family members would have higher financial performance than firms managed by non-family member professionals (Morsen, Chiu, & Cooley, 1969; Daily & Dollinger, 1992; Ang, Cole & Lin 2000). This could be the consequence of the special characteristic of family business in the combination of ownership and control enabling successful operation and profitability of the firm. Family member could envisage the successful vision of the founder on both personal

life and business, the value system, and the ethics as these are socialized from the founder to the succeeding generation (Stafford, Ducan, Dane, and Winter, 1989). In support of this Lee (2006) found family firms could grow faster and earn greater profit than firms in general and that the performance of family firm would be better if family members were involved in the management of the firm. Lee (2004) also found that firms with owners as managers would be more efficient and effective, and gaining higher return on investment compared to other firms. The financial performance is found to be positively related to management by family member in the case of large family firms or the performance would be greater if family members were part of the management (Andres, 2008; Barontini and Caprio, 2006; Hamadi, 2010; Kowalewski et al. 2009; Lee, 2006; Maritikainen et al., 2007; Maury, 2006; Minichilli et al., 2010; Sraer and Thesmar, 2007.) Similarly Allouche et al. (2008) found that for family firms the level of control by the family had major impact on the performance of the firms at least with respect to profitability. One reason for this was that the family member successor facilitated the smooth and stable transfer of operation as a consequence of his/her familiarity of the firm and the continuity of the development of company strategy. Succession of management by a family member also promoted the loyalty of staff and maintain company image. Therefore, family CEO would be highly motivated to improve the profitability of the company. (Davis, Schoorman & Donaldson, 1997)

Although there were no statistically significant differences of the ROE between the two groups, the mean of ROE for Family CEO group was higher than the Non-Family CEO. In this regard the study of EY and Cox Family Enterprise Center of Kennesaw State University found that the establishment of sustainability and brand had strengthened cohesion of the family through the ambition for growth leading to profitability measured by return on equity, and the resulting profitability contribute to further cohesion and determination. Family with high cohesion would focus on the future and give priority to the preparation of the next generation heir to lead the company (EY and Kennesaw State University, 2014).

Some studies have pointed out that with higher performance than normal business firm, the performance of family firms tended to drop under the management of successive generation of heirs (Ehrhardt, Nowak and Weber, 2005). This is consistent with the finding of McConaughy and Phillips (1999) concluding that firms managed by descendants would be less profitable than firms managed by the founders and that the difference in performance varied with the stages of life cycle of the firm. The founders were able to apply new ideas and technology through investment in tools and equipment and research and development, while the second generation heir would focus on establishing market position and potential. The lack of ambition was one reason for the discontinuity between generation when the original objectives were sidestepped to wealth and social status which were relatively unnecessary for the first and second generation owners. This is supported by Arosa et al. (2010) findings that the inclusion of independent directors in the firm did not improve company performance. The management of family firm would create value only when the founder assumed the CEO role in the firm or the founder took the Chairman position and hired non-family professional as CEO. Conversely, descendants were found to lessen the value of the firm upon assuming chairmanship or CEO status (Villalonga and Amit, 2006). McConaughy and Phillips’ (1999) study confirmed that control of business by the founders would make the firm grow faster and spend more on assets, investment, and research and development. In this regard, the studies of Villalonga and Amit (2006), and McConaughy and Phillips (1999) also showed that control of the business by the descendants could achieve greater profitability.

Generally, the owner family would prefer to save the high level executive positions for family members. This could result in executives with insufficient qualifications and abilities leading to the loss of competitiveness and inferior performance compared to the average firms. There are two things to be considered; first it is highly likely that the family CEO would improve the performance of business, second the comparative cost of hiring competent non-family CEO relative to the cost of succession from founder CEO to the next generation (Anderson and Reeb, 2003). Even though the Family CEO firms of the founder family have demonstrated better performance than firms in general as measured by profitability, those firms with the founders as owners and CEOs or those with the founders as chairmen and non-family members as professional CEO were found to attain higher market valuation (Anderson and Reeb, 2003). Consequently, certain foresighted family firms have welcome new generation recruits from non-family members to the management positions based more on the competency of the person rather than bloodline. They would be happy to see the succession of the new generation to the management but would also accept executives of one or two generation older. The firms might not be managed entirely by family members, but the owner families would benefit from the changing culture by the granting of owner role of equal status and value to the incoming non-family CEO. Thus the recruitment of non-family CEO requires careful stages and system involving training course, and testing all of which must be under the acknowledgement of family members. Committee consisting of family members must be formed to review and evaluate potential recruits with periodic report from appointed consultant. With family members as owner but not in executive positions, the relationship between the family and the firm would be more formal and professional (PWC UK, 2014).

## 6. Recommendations

The performance of family business firms listed in the SET could be measured in several ways. Profitability is just one indicator. There are several other factors affecting the performance. This study takes a simple comparison between performance of Family CEO firms and Non - Family CEO firms. A more detailed study could break down the Family CEO group into sub - groups of CEOs of different generation or of different industries. Performance with respect to other variables could be included as well. Future studies could take a qualitative approach in parallel to enable more accurate and direct measure of performance.

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## GREEN EXHIBITION VENUE: THE CASE STUDY OF THAILAND

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**Abstract**

With the trends of green practices and environmental concerns, most organizations adopted environmentally friendly policies. In the current study, the focus is on exhibition venues and their attempts to promote and support green practices for the exhibitors. Data were collected from 394 exhibitors, including the companies from various industries, such as textile and jewelry, book and printing media and electrical and electronic appliances. The results indicated that there are differences in green practice policy and implementation in different exhibition venues, regarding the aspect of communication and public relations. Furthermore, there are many areas for improvement for exhibition venues, including reduction of paper usage and printing materials, and increase in the use of electronic registration and websites. Discussions, practical guidelines, and directions for future research are also provided.

**Keywords:** Green practice, communication, public relations

**1. Introduction**

The significant growth in the number of events has lead to the emergence of a global event industry ranging from festivals, meetings, conferences, exhibitions, incentives, sports, to a range of other types of events (Rogers, 2008). Business events, also known as the MICE sector (meetings, incentives, conferences/conventions, and exhibitions), engage all segments of the hospitality and tourism industry, consisting of lodging, food and beverage, transportation, attraction, entertainment, and shopping (Fenich, 2012).

Exhibition, also known as trade show or exposition, is a subset of the business events (Fenich, 2012). In organizing the exhibitions, literally tons of materials are incorporated into the exhibition including exhibit booths, carpeting, collateral materials, give-away and souvenirs, etc., which becomes large amounts of waste after exhibitions (Kellen Meetings, 2011). In fact, the exhibition industry is the second largest producers of waste, behind the construction industry, which generates 600,000 tons of garbage every year, especially the exhibit booths, unread brochures and useless souvenirs (Kim, Terazawa, Huruya, & Shiraishi, 2002; Schueneman, 2012).

With growing concerns about environmental issues, many organizations attempts to improve their practices in several areas in order to support the sustainable business performance. Consequently, the exhibition industry tries to reduce that huge amount of yearly waste because the environmental issues have become a core value for many business sectors, and paper and plastic are the most obvious first line for attacking. Schueneman (2012) noted that many exhibitions increasingly used eco-friendly booths made from recycled material and increasingly offered electronic information instead of distributing pamphlets and brochures advertising exhibitors' products and services.

The objective of this current study is to examine green practices of exhibition venues in Thailand, according to their characteristics, including types of business, size and age of the organization.

## 2. Literature Review

According to Shrum, McCarty, and Lowrey (1995), the term green is referred to being environmentally friendly. Lee, Choi, and Breiter (2011) suggested the concept of green meetings to include all aspects of an event such as the meeting site, provision of catering, provision of transportation services, and procurement of meeting materials. The concept of green meetings will embrace three elements of sustainability (responsibility towards the environment, society, and economy) (Lee, Choi, & Breiter, 2011). Meanwhile, the core of green concept in MICE industry falls into five major categories including waste, carbon emissions, transportation, food and beverage, and communication, where paper and electricity usage are addressed as consistently as other two categories (Linden, 2010).

The green concept is applied by convention and exhibition venues, organizers and other players, and implemented into their management strategies (Katzel, 2007). They apply the environmentally best practices in the areas of selection of destination, accommodations, event venue and transportation, food and beverage, convention and exhibition production, and communication and marketing, which intend to eliminate or reduce waste, pollution, chemicals, and increase the utilization of resources (Convention Industry Council, 2004; DeSilets & Dickerson, 2008; Laing & Frost, 2010; Thailand Convention and Exhibition Bureau, 2009a). Davidson and Rogers (2006) suggested that green meeting procedures can overcome negative impacts on the environment; for instance, air pollution, emissions, opportunity costs, and accumulated waste. At the same time, implementation of green practices could save money saving (economical responsibility), protect the natural sources and wealth (social responsibility), reduce greenhouse gases emission and water usage, reuse of recycled products like paper (environmental responsibility), increase profit, and improve the destination's reputation (Davidson & Rogers, 2006).

The exhibition venues are very important stakeholders in exhibition industry because they are the necessary for holding the exhibitions (Yichen, 2010). They provide the space and facilities that are necessary for organizing the exhibitions such as audio-visual, IT and communication technology, and other support facilities (Thailand Convention and Exhibition Bureau, 2011e). Because of the increasing number of exhibitions, the venues need to have unique selling points such as size, facilities, location, or CSR policies to attract the consumers (Yichen, 2010). Liu and Feng (2014) suggested that exhibition venues and organizers are supposed to restrict and persuade the contractors to recycle the building materials during the event. Moreover, human resources who implement the operation policies and have professional experiences in exhibition management, like venue manager and operation staff, are needed (Thailand Convention and Exhibition Bureau, 2011e).

In Thailand, Thailand Convention and Exhibition Bureau (TCEB), as the official organization responsible for Thailand's MICE industry, launched the Go Green Exhibition Campaign to encourage exhibition venues and other players to make environmental accountability part of their business practices. Moreover, TCEB also provided Green Exhibition Guideline for exhibition venues and other players to conduct the green exhibitions as well (Thailand Convention and Exhibition Bureau, 2009c).

In terms of communication and public relations, it means the methods of promoting and advertising the events to the public in pre-event process or distributing the information regarding exhibitors to visitors during the events. Based on Green Meeting Guidelines of American Institute of Architects (2007), promotion and public relations should encourage recycling and other environmental planning efforts at every opportunity prior to the event through newsletters, e-mail, and Web sites, press releases, and press conferences. In this area, TCEB recommends the exhibition venues to, for instance, design an environmental friendly medium to promote the event; consider a plan to reduce paper usage; and promote using recycled paper for handbills and brochures. Moreover, TCEB also encourages the exhibition venues to use information technology (IT) to promote the event. For examples, TCEB guides the exhibition venues to promote the event through the use of event's website, emails to members, e-newsletter through the organization, and SMSs to mobile phones; and use LCD screens as a medium for public announcements to avoid using handbills and brochures as well.

According to the study of Mykletun, Bartkeviciute, and Puchkova (2014), the stakeholders of MICE industry intended to implement environmental practices, follow the environmental codes of conducts guidelines required by the convention business, and encourage environmental benefits. However, other studies have found that some exhibition venues still lacked of the necessary awareness to implement green policy into their operations, and overlooked the importance of consistency in implementing green concept (Laing & Frost, 2010). Some organizations perceived the implementation of green policy as a cost of operation because they needed to hire or train a staff with specific skills to implement green policy (ShMILE, 2006). Additionally, the staff implementing green policy might not have sufficient knowledge regarding environmental preservation and might not understand the green policy clearly (Despretz, 2001). These could be factors that affect the green level of exhibitions and may also affect the green policy implementation of exhibition venues.

Therefore, this study intends to examine the green practice level of Thailand's exhibition venues on the dimensions of communication and public relations by using the TCEB's Green Exhibition Guideline as the basis.

## 3. Research Methodology

This study employed a quantitative approach and used the established measurement scales as an instrument for conducting survey. The established measurement scales was constructed relating to TCEB's Green Meetings Guideline to assess the level of environmental policies implementation of exhibition venue, specifically in the area of communication and public relations. The second part was developed from previous studies that aimed to assess the key elements of environmental policies implementation process.

The survey was conducted at Queen Sirikit National Convention Center (QSNCC) and IMPACT Arena, Exhibition and Convention Center, which 400 established measurement scales were contributed to convenience samples (exhibitors) from four exhibitions. Finally, 394 completed measurement scales were returned and used in this study.

4. Results and Discussion

4.1 Exhibitors' Demographics

Table 1: Statistics of exhibitors' demographics

		Frequency	Percentage
Venue	QSNCC	203	51.5
	IMPACT	191	48.5
Time exhibited	Once	77	19.5
	2-5 times	126	32
	6-10 times	48	12.2
	More than 10 times	143	36.3
Type of business	Food and Beverage	41	10.4
	Textile and Jewelry	77	19.5
	Home and Furniture	24	6.1
	Book and Printing media	91	23.1
	Electrical and Electronic appliance	64	16.2
	Health and Beauty	40	10.2
	Others	57	14.5
Size of company	Small (< 50 employees)	233	59.1
	Medium (50-200 employees)	85	21.6
	Large (> 200 employees)	76	19.3
Age of organization	1-2 years	37	9.4
	3-5 years	46	11.7
	6-10 years	86	21.8
	More than 10 years	225	57.1
Type of organization	Government/State enterprise	54	13.7
	Association/Club/Foundation	46	11.7
	Private enterprise with local funding	219	55.6
	Private enterprise with partial or full foreign funding	25	6.3
	Local chain enterprise	34	8.6
	International chain enterprise	16	4.1
The company has green policy	Yes	318	80.7
	No	76	19.3
Familiarity with green exhibition guideline	Yes	113	28.7
	No	281	71.3

As show in Table 1, this study sampled 394 exhibitors which more than half of the respondents (51.50%) were exhibitors at QSNCC and the rest (48.50%) were exhibitors at IMPACT. The respondents were categorized into several types of business, including book and printing media (23.10%), textile and jewelry (19.50%), electrical and electronic appliance (16.20%), other businesses (14.50%), food and beverage (10.40%), health and beauty (10.20%), and home and furniture business (6.10%). Moreover, 36.30% of respondents had exhibited more than 10 times and more than half of respondents (59.10%) came from small-sized company with less than 50 employees.

In this study, 57.10% of respondents were from organizations with more than 10 years old and the most respondents (55.60%) were private enterprise with local funding. The majority of respondents (80.70%) were from the company having green policy. Besides, most of respondents (71.30%) were not familiar with any green exhibition guideline.

Table 2: Chi-Square test on types of business and green policy of company

Type of Business	Does the company have green policy?		Total
	Yes	No	
Food and Beverage	27 (65.90%)	14 (34.10%)	41 (100%)
Textile and Jewelry	71 (92.20%)	6 (7.80%)	77 (100%)
Home and Furniture	22 (91.70%)	2 (8.30%)	24 (100%)
Book and Printing media	65 (71.40%)	26 (28.60%)	91 (100%)
Electrical and Electronic	51 (79.70%)	13 (20.30%)	64 (100%)
Health and Beauty	31 (77.50%)	9 (22.50%)	40 (100%)
Others	51 (89.50%)	6 (10.50%)	57 (100%)
Total	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 22.356 (6), p = .001

According to Table 1.2, the study revealed that the majority of respondents from group of food and beverage business (65.90%), textile and jewelry business (92.20%), home and furniture business (91.70%), book and printing media business (71.40%), electrical and electronic appliance business (79.70%), health and beauty business (77.50%), and other businesses (89.50%) came from the companies having green policy.

Table 3: Chi-Square test on types of business and the familiarity with green exhibition guideline

Type of Business	Are you familiar with green exhibition guideline?		Total
	Yes	No	
Food and Beverage	15 (36.60%)	26 (63.40%)	41 (100%)
Textile and Jewelry	15 (19.50%)	62 (80.50%)	77 (100%)
Home and Furniture	8 (33.30%)	16 (66.70%)	24 (100%)
Book and Printing media	19 (20.90%)	72 (79.10%)	91 (100%)
Electrical and Electronic	24 (37.50%)	40 (62.50%)	64 (100%)
Health and Beauty	7 (17.50%)	33 (82.50%)	40 (100%)
Others	25 (43.90%)	32 (56.10%)	57 (100%)
Total	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 18.699 (6), p = .005

The results indicated that most of respondents from group of food and beverage business (63.40%), textile and jewelry business (80.50%), home and furniture business (66.70%), book and printing media business (79.10%), electrical and electronic appliance business (62.50%), health and beauty business (82.50%), and other businesses (56.10%) were not familiar with any green exhibition guideline.

Table 4: Chi-Square test on sizes of company and green policy of company

Size of Company	Does the company have green policy?		Total
	Yes	No	
Small	173 (74.20%)	60 (25.80%)	233 (100%)
Medium	73 (85.90%)	12 (14.10%)	85 (100%)
Large	72 (94.70%)	4 (5.30%)	76 (100%)
Total	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 17.313 (2), p = .000



According to Table 1.4, the study found that the major respondents from group of small-sized company (74.20%), medium-sized company (85.90%), and large-sized company (94.70%) came from the companies having green policy.

**Table 5:** Chi-Square test on sizes of company and the familiarity with green exhibition guideline

Size of Company	Are you familiar with green exhibition guideline?		Total
	Yes	No	
Small	56 (24.00%)	177 (76.00%)	233 (100%)
Medium	31 (36.50%)	54 (63.50%)	85 (100%)
Large	26 (34.20%)	50 (65.80%)	76 (100%)
<b>Total</b>	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 6.117 (2), p = .047

The results indicated that more than half of respondents from group of small-sized company (76.00%), medium-sized company (63.50%), and large-sized company (65.80%) were not familiar with any green exhibition guideline.

**Table 6:** Chi-Square test on ages of organization and green policy of company

Age of Organization	Does the company have green policy?		Total
	Yes	No	
1-2 years	25 (67.60%)	12 (32.40%)	37 (100%)
3-5 years	34 (73.90%)	12 (26.10%)	46 (100%)
6-10 years	62 (72.10%)	24 (27.90%)	86 (100%)
> 10 years	197 (87.50%)	28 (12.50%)	225 (100%)
<b>Total</b>	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 16.344 (3), p = .001

The study revealed that most of respondents from group of the organizations with 1-2 years old (67.60%), 3-5 years old (73.90%), 6-10 years old (72.10%), and more than 10 years old (87.50%) came from the companies having green policy.

**Table 7:** Chi-Square test on types of organization and green policy of company

Type of Organization	Does the company have green policy?		Total
	Yes	No	
Government/State enterprise	48 (88.90%)	6 (11.10%)	54 (100%)
Association/Club/Foundation	44 (95.70%)	2 (4.30%)	46 (100%)
Private enterprise with local funding	165 (75.30%)	54 (24.70%)	219 (100%)
Private enterprise with partial or full foreign funding	23 (92.00%)	2 (8.00%)	25 (100%)
Local chain enterprise	28 (82.40%)	6 (17.60%)	34 (100%)
International chain enterprise	10 (62.50%)	6 (37.50%)	16 (100%)
<b>Total</b>	318 (80.70%)	76 (19.30%)	394 (100%)

Pearson Chi-Square = 18.484 (5), p = .002

According to Table 1.7, the results showed that the major respondents from group of government/state enterprise (88.90%), association/club/foundation (95.70%), private enterprise with local funding (75.30%), private enterprise with partial or full foreign funding (92.00%), local chain enterprise (82.40%), and international chain enterprise (62.50%) came from the companies having green policy.

**Table 8:** Chi-Square test on types of organization and the familiarity with green exhibition guideline

Type of Organization	Are you familiar with green exhibition guideline?		Total
	Yes	No	
Government/State enterprise	25 (46.30%)	29 (53.70%)	54 (100%)
Association/Club/Foundation	7 (15.20%)	39 (84.80%)	46 (100%)
Private enterprise with local funding	50 (22.80%)	169 (77.20%)	219 (100%)
Private enterprise with partial or full foreign funding	13 (52.00%)	12 (48.00%)	25 (100%)
Local chain enterprise	12 (35.30%)	22 (64.70%)	34 (100%)
International chain enterprise	6 (37.50%)	10 (62.50%)	16 (100%)
<b>Total</b>	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 23.914 (5), p = .000

The study found that more than half of respondents from group of private enterprise with partial or full foreign funding (52.00%) were familiar with green exhibition guideline. Whereas, most of respondents from group of government/state enterprise (53.70%), association/club/foundation (84.80%), private enterprise with local funding (77.20%), local chain enterprise (64.70%), and international chain enterprise (62.50%) were not familiar with any green exhibition guideline.

**Table 9:** Chi-Square test on green policy of company and the familiarity with green exhibition guideline

Does the company have green policy?	Are you familiar with green exhibition guideline?		Total
	Yes	No	
Yes	106 (33.30%)	212 (66.70%)	318 (100%)
No	7 (9.20%)	69 (90.80%)	76 (100%)
<b>Total</b>	113 (28.70%)	281 (71.30%)	394 (100%)

Pearson Chi-Square = 17.450 (1), p = .000

Table 9 demonstrates that 66.70% of respondents from group of company having green policy and 90.80% of respondents from group of company did not have green policy were not familiar with any green exhibition guideline.

**4.2 Green Practice Level of Exhibition Venues**

**Table 10:** Statistics of green level of exhibition venues on communication and public relations

Communication and Public Relations	Mean
1. The venue provides relevant information for exhibition via exhibition's website and/or e-mail.	4.96
2. The venue promotes the exhibition through the use of exhibition's website, e-mail, and/or SMS on mobile phone.	4.92
3. The venue provides a place to collect any unwanted printing materials from visitors upon exit for waste separation before recycling.	4.86



<b>Communication and Public Relations</b>	<b>Mean</b>
4. The venue supports you to promote your display booth through the use of company's website, e-mail, and/or SMS on mobile phone.	4.85
5. The venue supports you to provide relevant information of your display booth via company's website and/or e-mail to avoid using handbills and brochures during the exhibition.	4.78
6. The venue supports you to use LCD screen and/or electronic sound distribution system of the venue as a medium for public announcements to avoid using handbills and brochures during the exhibition.	4.75
7. The venue encourages you to print double-sided when you use paper as media.	4.71
8. The venue encourages you to use recycled paper when you use paper as media.	4.69
9. The venue offers electronic registration via exhibition's website.	4.61
10. The venue encourages you to reduce paper usage such as handbills and brochures as media.	4.42

The results of this study showed a slightly difference of green practice level of exhibition venues on communication and public relations, which the highest mean score is 4.96 and the lowest mean score is 4.42. The study found that providing relevant information for exhibition via exhibition's website and/or e-mail was the first ranking of green practice level of exhibition venues on communication and public relations, while encouraging exhibitors to reduce paper usage such as handbills and brochures as media was the last ranking in this category.

Further grouping the green guidelines in this category by high and low mean score, the green guidelines consisting of promoting the exhibition through the use of exhibition's website, e-mail, and/or SMS on mobile phone; providing a place to collect any unwanted printing materials from visitors upon exit; supporting exhibitors to promote the display booths through the use of company's website, e-mail, and/or SMS on mobile phone; and supporting exhibitors to provide relevant information of the display booth via company's website and/or e-mail were grouped in high mean score of green practice level of exhibition venues on communication and public relations. Whereas, the green guidelines including supporting exhibitors to use LCD screen and/or electronic sound distribution system of the venue as a medium for public announcements; encouraging exhibitors to print double-sided; encouraging exhibitors to use recycled paper; and offering electronic registration via exhibition's website were grouped in low mean score of green practice level of exhibition venues in this category.

This result goes along with the industry study developed by EXPO Magazine, the Philadelphia Convention & Visitors Bureau, and the Pennsylvania Convention Center Authority (2011). The study found that emails and websites are used by nearly every producer and are the number one and two most common used mediums for attendance marketing. Nevertheless, according to the study of IMEX Global Data Exchange (2007), the respondents were asked to rank the importance of green initiatives that they felt suppliers attending exhibitions ought to introduce. The results showed that 'print brochures on recycled paper' was the first rank of total six green initiatives. The results contrast to this study which found that encouraging exhibitors to use recycled paper by exhibition venues was grouped in low mean score of green practice level of exhibition venues. Furthermore, Park and Boo (2010) also identified that one green practice that the convention hosts can actively influence is recycling of leaflets since the conventions generate a lot of recyclable waste, so it creating a major opportunity for this type of green practice.

Considered from the green practice level of exhibition venues on exhibition communication and public relations, it can notice that the exhibition venues focus more on the waste reduction than the chemical reduction as most of the guidelines that aimed to reduce the number of waste were grouped in high mean score.

This result is supported by the Expo Magazine (2010) which reported that the organizers are working on recycling and reducing waste at their events by 93 and 70 percent respectively which they require to work closely with the venues. At the same time, the organizers expressed that the recycling was the most important green venue practice as well. Furthermore the survey of current green practices in US's museums and private businesses conducted by American Institute for Conservation (2009) also revealed that waste reduction by performed recycling activities was the winner in this category.

## 5. Conclusions and Recommendations

With increasing importance of green concept in MICE industry, exhibition organizers and venues, including related companies, are well-prepared for the changing in demand of their customers and social trends. The current study identified the green level of exhibition venues on communication and public relations and found that the exhibition venues succeeded in providing information about the exhibition and promoting the exhibition in the high level of green practices. In addition, using new media, such as SMS, email and websites, helped reducing waste, leading to the more environmentally friendly approach to exhibition management.

The findings presented here suggested that through this empirical study, exhibition venues have shown their awareness and capability about the green level, regarding communication and public relations. However, there are areas that the venues should improve and further develop including reduction of using handbills and brochures as well as encouraging the adoption of electronic registration.

Despite its contributions to exhibition industry, the study has a limitation in terms of cross-sectional study, which may not totally reflect the long-term generalization of the findings, especially in the concept of green or sustainable business development.

Regarding practical contribution, exhibition managers can improve their green practices by reducing the usage of paper and decreasing waste. Furthermore, the use of new technology, such as social media, can effectively help the organizations reduce costs and support sustainable business practices. For further research, new research topics can further investigate other green dimensions, including green implementation and process of exhibition management. Additionally, it is also crucial to explore the motivations, cost and benefits, and factors affecting the adoption of green practices among the exhibition venues.

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## IMPACTS OF EXTERNAL FINANCING ON THE RISK LEVEL OF VIETNAM WATER INDUSTRY DURING THE GLOBAL CRISIS 2007 - 2009

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# IMPACTS OF EXTERNAL FINANCING ON THE RISK LEVEL OF VIETNAM WATER INDUSTRY DURING THE GLOBAL CRISIS 2007 - 2009

by

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## Abstract

This paper estimates the impacts of external financing on market risk for the listed firms in the Viet nam water industry, esp. after the financial crisis 2007-2009.

First, by using quantitative and analytical methods to estimate asset and equity beta of total 10 listed companies in Viet Nam water industry with a proper traditional model, we found out that the beta values, in general, for many institutions are acceptable.

Second, under 3 different scenarios of changing leverage (in 2011 financial reports, 30% up and 20% down), we recognized that the risk level, measured by equity and asset beta mean, decreases (0,606) when leverage increases to 30% and vice versa.

Third, by changing leverage in 3 scenarios, we recognized the dispersion of risk level decreases (measured by equity beta var) if the leverage increases to 30%.  
Finally, this paper provides some outcomes that could provide companies and government more evidence in establishing their policies in governance.

**Keywords:** Equity beta, Financial structure, Financial crisis, Risk, External financing, Water industry

**Jel Classification:** G010, G100, G390

## 1. Introduction

Financial system development has positively related to the economic growth, throughout many recent years, and Viet Nam water industry is considered as one of active economic sectors. We select the period 2007-2009 for this study as it is the economic crisis time and choose water industry as it is one of the most the vital industries. We note that GDP of Viet nam increases during the period 2006-2010, but decreases in 2009 (see exhibit 4), also the interest rate (basic and borrowing rates) and inflation reached the highest level in 2008 (see exhibit 1, 2 and 3), also the VNI index reduced strongly during 2009 (see exhibit 6).

This paper is organized as follow. The research issues will be covered in section 1. Literature review and conceptual theories are introduced in the next section 2. Then, methodology and data are described in section 3. Session 4 presents empirical results and findings. Lastly, section 5 will conclude with some policy suggestions. This paper also supports readers with references, exhibits and relevant web sources.

## 2. Research Issues

We mention some issues on the estimating of impacts of external financing on beta for listed water companies in Viet Nam stock exchange as following:

Issue 1: Whether the risk level of water firms under the different changing scenarios of leverage increase or decrease so much.

Issue 2: Whether the dispersed distribution of beta values become large in the different changing scenarios of leverage estimated in the water industry. Beside, we also propose some hypotheses for the above issues:

Hypothesis 1: because using leverage may strongly affect business returns, changing leverage scenarios could strongly affect firm risk.

Hypothesis 2: as external financing is vital for the business development, there will be large disperse in beta or risk values estimated.

## 3. Literature review

Goldsmith (1969), Mc Kinnon (1973) and Shaw (1973) pointed a large and active theoretical and empirical literature has related financial development to the economic growth process.

Black (1976) proposes the leverage effect to explain the negative correlation between equity returns and return volatilities. Diamond and Dybvig (1983) said banks can also help reduce liquidity risk and therefore enable long-term investment.

Fama, Eugene F., and French, Kenneth R., (2004) also indicated in the three factor model that “value” and “size” are significant components which can affect stock returns. They also mentioned that a stock’s return not only depends on a market beta, but also on market capitalization beta. The market beta is used in the three factor model, developed by Fama and French, which is the successor to the CAPM model by Sharpe, Treynor and Lintner. Next, Peter and Liuren (2007) mentions equity volatility increases proportionally with the level of financial leverage, the variation of which is dictated by managerial decisions on a company’s capital structure based on economic conditions. And for a company with a fixed amount of debt, its financial leverage increases when the market price of its stock declines.

Reinhart and Rogoff (2009) pointed the history of finance is full of boom-and-bust cycles, bank failures, and systemic bank and currency crises. Adrian and Shin (2010) stated a company can also proactively vary its financial leverage based on variations on market conditions.

Then, as Luis E. Peirero (2010) pointed, the task of estimating cost of equity in emerging markets is more difficult because of problems such as collecting data in short periods.

Next, Umar (2011) found that firms which maintain good governance structures have leverage ratios that are higher (forty-seven percent) than those of firms with poor governance mechanisms per unit of profit. Flifel (2012) stated today, the assumption of efficient capital markets is very controversial, especially in these times of crisis, and is challenged by research showing that the pricing was distorted by detection of long memory. Finally, Chen et al (2013) supports suspicions that over-reliance on short-term funding and insufficient collateral compounded the effects of dangerously high leverage and resulted in undercapitalization and excessive risk exposure for Lehman Brothers.

Finally, financial leverage can be considered as one among many factors that affect business risk of water firms.

## 4. Conceptual theories

### 4.1 The impact of financial leverage on the economy

A sound and effective financial system has positive effect on the development and growth of the economy. Financial institutions not only help businesses to reduce agency problems but also enable them to enhance liquidity capacity and long-term capital. And financial innovation also reduces the cost of diversification. So, finance and growth has interrelated.

In a specific industry such as water industry, on the one hand, using leverage with a decrease or increase in certain periods could affect tax obligations, revenues, profit after tax and technology innovation and compensation and jobs of the industry.

During and after financial crises such as the 2007-2009 crisis, there raises concerns about the role of financial leverage of many countries, in both developed and developing markets. On the one hand, lending programs and packages might support the business sectors. On the other hand, it might create more risks for the business and economy.

In short, the using of financial leverage could have both negatively or positively impacts on the financial results or return on equity of a company. The more debt the firm uses, the more risk it takes. And FL is a factor that causes financial crises in many economies and firms. Using leverage too much indicates the firm met financial distress.

On the other hand, in the case of increasing leverage, the company will expect to get more returns. The financial leverage becomes worthwhile if the cost of additional financial leverage is lower than the additional earnings before taxes and interests (EBIT). FL has become a positive factor linking finance and growth in many companies. Beside, leverage choice could also become a determinant of firms’ capital structure and financial risk.

## 5. Methodology and data

In order to calculate systemic risk results and leverage impacts, in this study, we use the live data during the crisis period 2007-2009 from the stock exchange market in Viet Nam (HOSE and HNX and UPCOM). In detailed, we collect stock price data, risk free rate and VNI index data during this period.

In this research, analytical research method is used, philosophical method is used and specially, leverage scenario analysis method is used. Analytical data is from the situation of listed water firms in VN stock exchange and curent tax rate is 25%.

Analytical method is used to describe the calculated data and number in the context of the crisis. Philosophical method means the study done based on the observation of several factors fluctuating including leverage changes, competitor size changes. Leverage scenario analysis is used to support for analysis part. The reason of changing leverage to 30% and 20% is that they can represent for financing decision in a company. Asset beta is estimated based on the formula of unlevered beta. Equity beta orunlevered beta is calculated based on the below formula:

$$\text{Beta } (\beta) = \frac{\text{Covariance (Market Index, Stock Price)}}{\text{Variance of Market Index}}$$

Finally, we use the results to suggest policy for both these enterprises, relevant organizations and government.

6. Results

The research sample has total 10 listed firms in the water market with the live data from the stock exchange.

Firstly, we estimate equity beta values of these firms and use financial leverage to estimate asset beta values of them. Secondly, we change the leverage from what reported in F.S 2009 to increasing 30% and reducing 20% to see the sensitivity of beta values. We found out that in 3 cases, asset beta mean values are estimated at 0,724, 0,606 and 0,818 which are negatively correlated with the leverage. Also in 3 scenarios, we find out equity beta mean values (0,913, 0,801 and 0,991) are also negatively correlated with the leverage. Leverage degree changes definitely has certain effects on asset and equity beta values.

6.1 Empirical Research Findings

In the below section, data used are from total 10 listed water companies on VN stock exchange (HOSE and HNX mainly). In the scenario 1, current financial leverage degree is kept as in the 2009 financial statements which is used to calculate market risk (beta). Then, two (2) FL scenarios are changed up to 30% and down to 20%, compared to the current FL degree.

Market risk (beta) under the impact of tax rate, includes: 1) equity beta; and 2) asset beta.

6.1.1 Scenario 1: current financial leverage (FL) as in financial reports 2009.

In this case, all beta values of 10 listed firms on VN water market as following:

Table 1: Market risk of listed companies on VN water market

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage
1	BTW	2,272	1,951	PJS as comparable	11,3%
2	BWA	0,413	0,381	LKW as comparable	6,1%
3	CLW	0,452	0,293	NBW as comparable	28,0%
4	GDW	1,723	1,210	BTW as comparable	23,8%
5	LKW	0,438	0,376	NTW as comparable	11,4%
6	NBW	0,634	0,435	SFC as comparable	25,2%
7	NNT	0,105	0,017	PCG as comparable	67,2%
8	NTW	0,493	0,386	HFC as comparable	17,3%
9	PJS	2,552	2,176	VMG as comparable	11,8%
10	TDW	0,046	0,017	NNT as comparable	50,7%
				Average	25,28%

6.1.2 Scenario 2: financial leverage increases up to 30%

If leverage increases up to 30%, all beta values of total 10 listed firms on VN water market as below:

Table 2: Market risks of listed water firms (case 2)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage (30% up)
1	BTW	2,094	1,710	PJS as comparable	18,4%
2	BWA	0,363	0,327	LKW as comparable	9,9%
3	CLW	0,345	0,188	NBW as comparable	45,5%
4	GDW	1,421	0,870	BTW as comparable	38,7%
5	LKW	0,393	0,320	NTW as comparable	18,6%
6	NBW	0,561	0,331	SFC as comparable	40,9%
7	NNT	-0,065	0,006	PCG as comparable	109,1%
8	NTW	0,460	0,331	HFC as comparable	28,1%
9	PJS	2,448	1,979	VMG as comparable	19,2%
10	TDW	-0,014	-0,003	NNT as comparable	82,3%
				Average	41,09%

6.1.3 Scenario 3: leverage decreases down to 20%

If leverage decreases down to 20%, all beta values of total 10 listed firms on the water market in VN as following:

**Table 3:** Market risk of listed water firms (case 3)

Order No.	Company stock code	Equity beta	Asset beta (assume debt beta = 0)	Note	Financial leverage (20% down)
1	BTW	2,392	2,121	PJS as comparable	11,3%
2	BWA	0,447	0,420	LKW as comparable	6,1%
3	CLW	0,527	0,379	NBW as comparable	28,0%
4	GDW	1,937	1,475	BTW as comparable	23,8%
5	LKW	0,469	0,415	NTW as comparable	11,4%
6	NBW	0,681	0,509	SFC as comparable	25,2%
7	NNT	0,204	0,067	PCG as comparable	67,2%
8	NTW	0,514	0,425	HFC as comparable	17,3%
9	PJS	2,621	2,311	VMG as comparable	11,8%
10	TDW	0,115	0,057	NNT as comparable	50,7%
Average					25,28%

All three above tables and data show that values of equity and asset beta in the case of increasing leverage up to 30% or decreasing leverage degree down to 20% have certain fluctuation.

Comparing statistical results in 3 scenarios of changing leverage:

**Table 4:** Statistical results (FL in case 1)

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	2,552	2,176	0,3763
MIN	0,046	0,017	0,0289
MEAN	0,913	0,724	0,1886
VAR	0,8376	0,6080	0,2297
Note: Sample size : 10			

**Table 5:** Statistical results (FL in case 2)

Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	2,448	1,979	0,4692
MIN	-0,065	-0,003	-0,0624
MEAN	0,801	0,606	0,1947
VAR	0,7694	0,4877	0,2818
Note: Sample size : 10			

**Table 6:** Statistical results (FL in case 3)

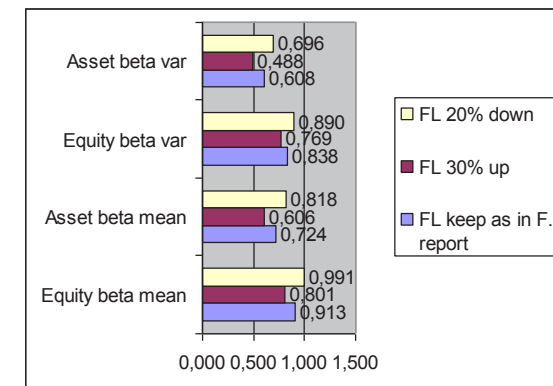
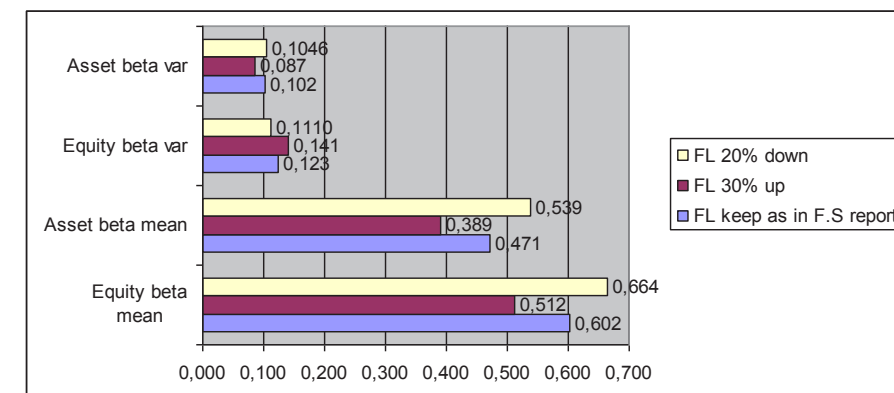
Statistic results	Equity beta	Asset beta (assume debt beta = 0)	Difference
MAX	2,621	2,311	0,3091
MIN	0,115	0,057	0,0583
MEAN	0,991	0,818	0,1726
VAR	0,8897	0,6964	0,1933
Note: Sample size : 10			

Based on the above results, we find out:

Equity beta mean values in all 3 scenarios are low ( $< 1$ ) and asset beta mean values are also small ( $< 0,9$ ) although max equity beta values in some cases might be higher than ( $>$ ) 1. In the case of reported leverage in 2009, equity beta value fluctuates in an acceptable range from 0,046 (min) up to 2,552 (max) and asset beta fluctuates from 0,017 (min) up to 2,176 (max). If leverage increases to 30%, equity beta moves in a range from -0,065 (min) up to 2,448 (max unchanged) and asset beta moves from -0,003 (min) up to 1,979 (max). Hence, we note that there is a decrease in equity beta min value if leverage increases. When leverage decreases down to 20%, equity beta value fluctuates in a range from 0,115 to 2,621 (max) and asset beta changes from 0,057 (min) up to 2,311 (max). So, there is a small increase in equity beta min value when leverage decreases in scenario 3.

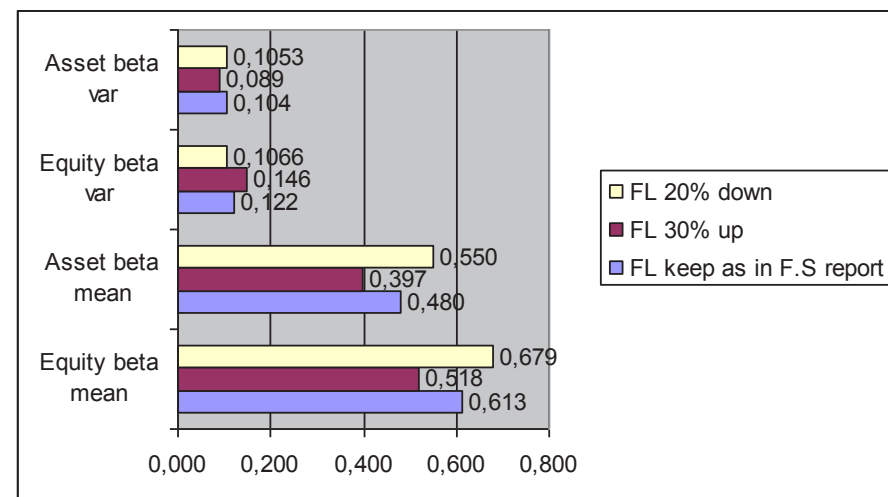
Beside, Exhibit 5 informs us that in the case 30% leverage up, average equity beta value of 10 listed firms decreases down to -0,112 while average asset beta value of these 10 firms decreases little more up to -0,118. Then, when leverage reduces to 20%, average equity beta value of 10 listed firms goes up to 0,078 and average asset beta value of 10 firms increases more to 0,094.

The below figure 1 shows us : when leverage degree decreases down to 20%, average equity and asset beta values decrease slightly (0,991 and 0,818) compared to those at the initial rate of 25% (0,913 and 0,724). Then, when leverage degree increases up to 30%, average equity beta decreases little more and average asset beta value also decreases more (to 0,801 and 0,606). However, the fluctuation of equity beta value (0,769) in the case of 30% leverage up is lower than ( $<$ ) the results in the rest 2 leverage cases.

**Figure 1:** Comparing statistical results of three (3) scenarios of changing FL (2007-2009)**Figure 2:** Comparing statistical results of three (3) scenarios of changing FL (2007-2011)



**Figure 3:** Comparing statistical results of three (3) scenarios of changing FL (2009-2011)



## 6.2 Discussion

Looking at figure 2, it is noted that in case leverage up 30%, during 2007-2009 period, asset and equity beta mean (0,606 and 0,801) of water industry are higher than those in the period 2007-2011 (0,389 and 0,512). Looking at exhibit 7, we can see asset beta mean and equity beta mean are higher than those of consumer good industry (0,222 and 0,630). This relatively shows us that financial leverage does affect asset beta values.

## 7. Conclusion

In summary, the government has to consider the impacts on the mobility of capital in the markets when it changes the macro policies. Beside, it continues to increase the effectiveness of building the legal system and regulation supporting the plan of developing water market. The Ministry of Finance continue to increase the effectiveness of fiscal policies and tax policies which are needed to combine with other macro policies at the same time. The State Bank of Viet Nam continues to increase the effectiveness of capital providing channels (including many kinds of loan) for water companies as we could note that in this study when leverage is going to increase up to 30%, the risk level decreases much (as well as the asset beta var), compared to the case it is going to decrease down to 20%.

Furthermore, the entire efforts among many different government bodies need to be coordinated. It means that not only the State Bank but also the Ministry of Finance and Regulatory government bodies need to cooperate in providing policies to support the water industry.

Finally, this paper suggests implications for further research and policy suggestion for the Viet Nam government and relevant organizations, economists and investors from current market conditions. Management can note the relationship between financing decision and market risk level. Future research implication includes research of the combination of some factors on the risk level such as: leverage and tax rate.

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Appendices

Exhibit

**Exhibit 1:** Interest rates in banking industry during crisis  
(source: Viet Nam commercial banks)

Year	Borrowing Interest rates	Deposit Rates	Note
2011	18% - 22%	13% - 14%	Approximately (2007: required reserves ratio at SBV is changed from 5% to 10%) (2009: special supporting interest rate is 4%)
2010	19% - 20%	13% - 14%	
2009	9% - 12%	9% - 10%	
2008	19% - 21%	15% - 16, 5%	
2007	12% - 15%	9% - 11%	

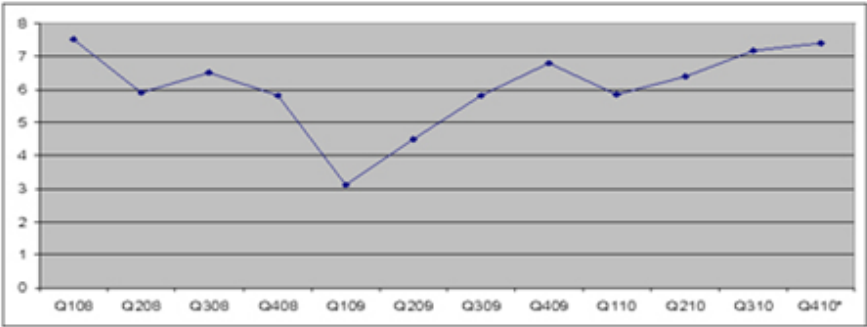
**Exhibit 2:** Basic interest rate changes in Viet Nam  
(source: State Bank of Viet Nam and Viet Nam economy)

Year	Basic rate	Note
2011	9%	
2010	8%	
2009	7%	
2008	8,75% - 14%	Approximately, fluctuated
2007	8,25%	
2006	8,25%	
2005	7,8%	
2004	7,5%	
2003	7,5%	
2002	7,44%	
2001	7,2% - 8,7%	Approximately, fluctuated
2000	9%	

**Exhibit 3:** Inflation, GDP growth and macroeconomics factors  
(source: Viet Nam commercial banks and economic statistical bureau)

Year	Inflation	GDP	USD/VND rate
2011	18%	5,89%	20.670
2010	11,75% (Estimated at Dec 2010)	6,5% (expected)	19.495
2009	6,88%	5,2%	17.000
2008	22%	6,23%	17.700
2007	12,63%	8,44%	16.132
2006	6,6%	8,17%	
2005	8,4%		
Note	approximately		

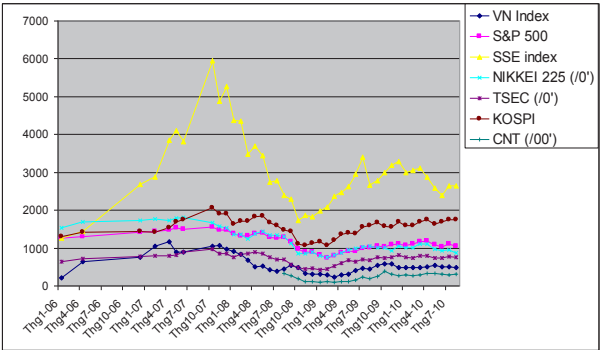
**Exhibit 4:** GDP growth Việt Nam 2006 - 2010 (source: Bureau Statistic)



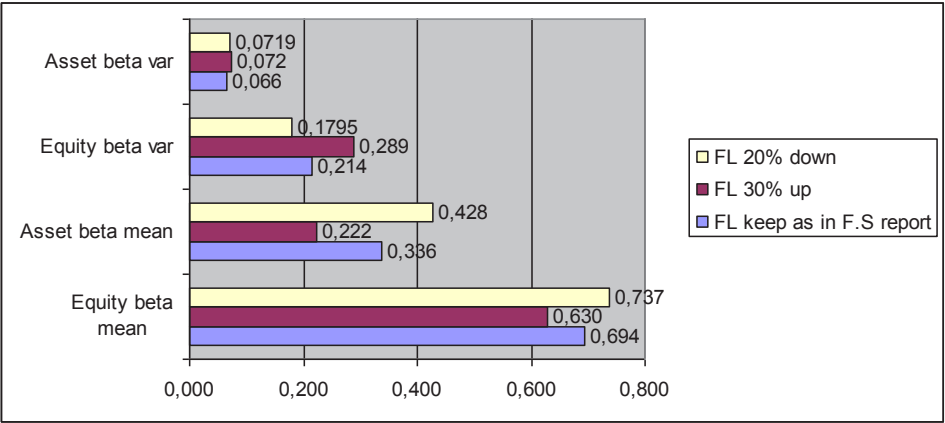
**Exhibit 5:** Increase/decrease risk level of listed water firms under changing scenarios of leverage: in 2011 F.S reports, 30% up, 20% down in the period 2007 - 2009

Order No.	Company stock code	FL keep as in F.S report		FL 30% up		FL 20% down	
		Equity beta	Asset beta	Increase /Decrease (equity beta)	Increase /Decrease (asset beta)	Increase /Decrease (equity beta)	Increase /Decrease (asset beta)
1	BTW	2,272	1,951	-0,177	-0,241	0,120	0,171
2	BWA	0,413	0,381	-0,050	-0,054	0,034	0,039
3	CLW	0,452	0,293	-0,107	-0,106	0,075	0,086
4	GDW	1,723	1,210	-0,303	-0,339	0,214	0,266
5	LKW	0,438	0,376	-0,045	-0,056	0,031	0,040
6	NBW	0,634	0,435	-0,073	-0,103	0,047	0,075
7	NNT	0,105	0,017	-0,170	-0,011	0,099	0,050
8	NTW	0,493	0,386	-0,033	-0,056	0,021	0,039
9	PJS	2,552	2,176	-0,104	-0,197	0,068	0,135
10	TDW	0,046	0,017	-0,060	-0,019	0,069	0,040
		Average		-0,112	-0,118	0,078	0,094

**Exhibit 6:** VNI Index and other stock market index during crisis 2006 – 2010



**Exhibit 7:** Comparing statistical results of three (3) scenarios of changing FL of 121 listed firms in the consumer good industry



**Author note**

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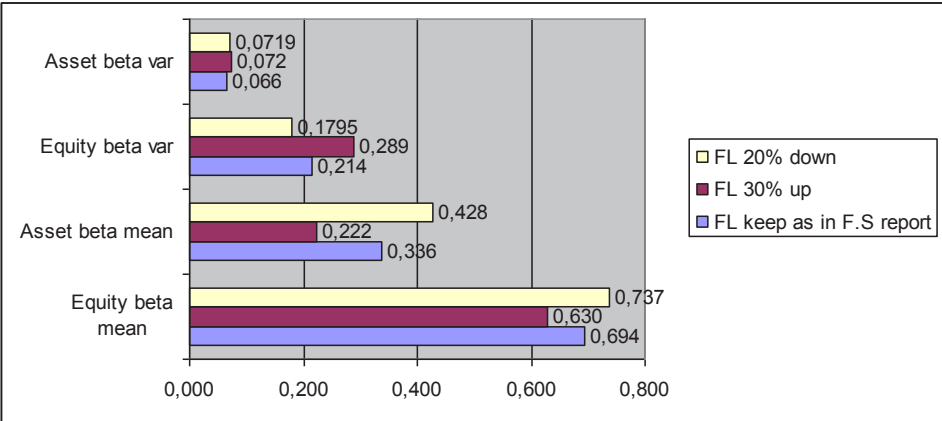
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# MARKET INTERRUPTION AND GENDER EARNING GAP IN THAI LABOR MARKET

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## Abstract

This paper studies gender earning gap in Thai labor market. An overall gender earning gap in Thailand is decreasing over time. For the group of labors who have experience no more than 5 years (entry-level), an average female worker earns more than an average male worker since 1990s. On the other hand, for the group of labors who have experience more than 5 years (experienced), an average male worker earn more than an average female. Results from both parametric (Blinder-Oaxaca, 1973) and semi-parametric (DiNardo-Fortin-Lemieux, 1996) decompositions show that the disadvantage of entry-level female workers is significantly smaller than the disadvantage of experienced female workers. In addition, we found that a marital status plays an important role in determining gender earning gap for experienced workers but not for entry-level workers. This finding suggests that a natural market interruption of female, e.g., child-bearing duty, is an important factor determining gender earning gap in Thai labor market rather than gender market discrimination.

**Keywords:** Thailand, gender earning gap, market interruption, entry - level labor, decomposition

JEL classification: J13, J16, J71

## 1. Introduction

The gender discrimination has been in a debate for a century in various aspects such as social (i.e. the equality to work, to study and to live) economics (paid salary), politics (gender of the leader) and religion. It is the fact that, physically, men seem to be stronger than women. This aspect is the main factor that creates the gender discrimination. However, the physical differences between men and women do not always reflect the abilities or skills among them. The native cultures of many countries make the gender discrimination last for a long time until the industrial revolution when the demand for labor has been increased. Since then, the norm of living has been changed forever. For most of the world, women have been provided the opportunities to work outside their homes much more than the past. Now we can see many women become leaders of various institutions, from small businesses to the largest global chain companies including being the leaders of many countries. Although these changes have been ongoing for over 200 years, we can still notice the gender inequality in many parts of the world. Most of gender discrimination in economical aspect is the earning inequality which is easy to measure and can reflect the standard of living, even in developed countries. Bertrand and Hallock (2001) showed that high-level executive women in the US

firms earned about 45% less than men due to the size of company, age and seniority. Manning & Swaffield (2005) proposed that a human capital, job-shopping and psychological effect have caused the gender earning gap to increase in UK labor market after 10 years of working experience. In Denmark, Datta Gupta and Eriksson (2006) found that there were still gender gaps in the manufacturing sectors even though there are new workplace practices. Due to their family responsibilities, the women's work schedules are less flexible which prevents them from obtaining work-related training that can earn them higher wages.

Thailand has transformed from the agricultural economy to an industrialized economy since 1977 when the GDP from manufacturing sector was higher than those of the agricultural sector. The economic growth increased from 5% per year in 1971-1985 to above 8% per year in 1987-1995 and peaked at around 12% per year in 1988-1990 (NESDB, 2009). During these times, a large amount of the laborers have been needed for the industrial sectors. Women have been major sources of the labor supply expansion and the government started to launch the education policies to serve the country development. Since then, women have got higher education and have started to work in the manufacturing or service sectors which made them receive higher wages or earnings. From the former studies, the earning inequalities are reducing over time under the expansion of education for the females. Although females have returned to receive higher education more than males (Nakavachara, 2010), Warunsiri and McNown, 2010) and Beaudry and Lewis (2014), the wage inequality remains exists, especially in the top-end and low-end of the laborers which is caused by the massification of higher-education (higher than high school level) and the migration to work in the low-end city respectively (Lathapipat (2009).

In Thai social norm, women have to take care of their family members especially after they get married which may be a factor that makes the discrimination in the labor market. Our study tries to find the major sources of discrimination in Thai labor market by using the Labor Force Survey (LFS) data of Thailand that has been collected for 28 years (1985-2012). We separate the labor into two groups using the time the laborers have gained experience. The entry-level laborers are classified as the laborers who have just entered to the labor market (not more than 5 years of experience). The experienced groups are classified by a laborer with experience more than 5 years. We start with the entry-level laborers for testing the gender wage gap and then compare the result with those of the experienced group. We would like to know what the major sources of gender discrimination or gender earning gap are and whether and how we can reduce the gap.

In this paper, we analyze the gender earning inequality within and between the entry-level laborers and the experienced laborers for the Thai labor market. We follow the Blinder-Oaxaca (BO) decomposition method and compare the result with those using the semi-parametric method proposed by DiNardo-Fortin-Lemieux (DFL). The second part of this paper introduces the background of Thai's labor market since 1985-2012. This section contains the data of Thailand's Labor Force Survey (LFS), labor demand and supply, the unemployment rate, labor in each working status and industrial sectors including the characteristics of each group of laborers. We propose the entry-level laborers versus the experienced groups which make more clearly that why we are interested in the entry-level laborers. In the third part, we analyze these data using the BO decomposition and the results on each type of labor groups. The semi-parametric decomposition is used for analyzing the distribution of earning inequality for each group of laborers and then the results are compared with those of the BO. Finally, we provide the discussions of the study and make the important remark and the needed-to-do topics for the future research.

## 2. Background of Thai's labor market

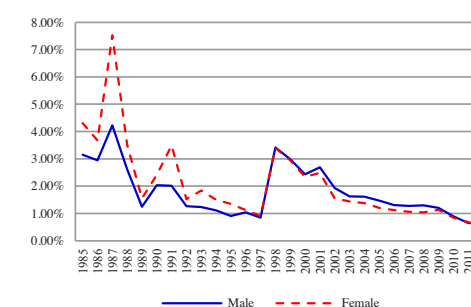
This paper uses 28 years of time series data from Thailand's Labor Force Survey (LFS) during 1985-2012 collected by the National Statistical Office (NSO). NSO had initiated the data survey since 1963 and conducted a survey only during the 1st and the 3rd quarter, in February and August respectively. In 1984-1997, NSO had conducted surveys 3 times a year in February (coinciding with the non-agricultural season), May (when the graduates enter to job market) and August (during the agricultural season). Since 1998, they have conducted surveys quarterly and after 2001 they have made the monthly survey. We use only the 3rd quarter of each year, which had surveyed completely for time series data and entry-level laborers have time to find and get the jobs, to analyze in this study. We are interested in the information of gender, wage, earnings, year of schooling, work hours, marital status, employment rate, unemployment rate, occupations and industries.

This study defines full-time working hour as total hours per week of 35 hours or more. Before 2001, we have legal age of labor force from 13 years old which was then changed to 15 years old to comply with the child labor law. Therefore, we consider the age between 15-65 years with total hours worked of 35 hours a week or more as full-time employment. The earnings include wage or salary, bonus, overtime, and other money which is calculated in real term of "Baht per hour" unit. All earnings are deflated by using the 2011 consumer price index (CPI) as the base year.

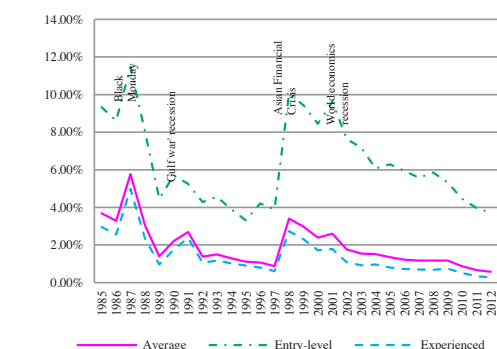
We measure education of each person by using the years of schooling which can be defined as who had learnt more will have more years of schooling. From the survey data there are many types of level of education and we found that some of people have to stop to learn before they finish the level. Then we generate the years of schooling from the reported level of education and convert to number of years that people attain to school. The current education system in Thailand is 6-3-3: the first six years are for the primary school, the next three years are for secondary school and the last three years are for the high school or technical college degree (lower than B.S. degree). In the past, we used the education system as 4-3-3-2 with 4 years compulsory education in 1936 and extended to 7 years in 1951 with 7-3-2 education system. The education system changed to 6-3-3 in 1977 under the first 6 years compulsory education policy and extended to 9 years and 12 years compulsory education in 1999 and 2002 respectively. We can divide the education level into many classes. For example if we focus only 3 classes, higher education, high school and lower education, we can group higher education as who have 16 years or more years of schooling, for 12-15 years of schooling is the high school and the lower education group who have less years of schooling than 12 years. In this paper we usually use the year of schooling directly, sometime we categorize the level of education for seeing obviously.

**Figure 1:** The unemployment rate, 1985-2012.

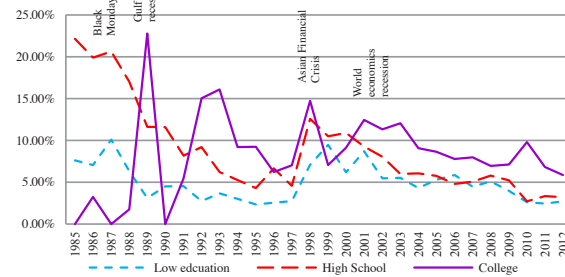
**Panel A:** The unemployment rate by gender.



**Panel B:** Unemployment rate by group of experience



**Panel C: The unemployment rate of entry-level by education level**



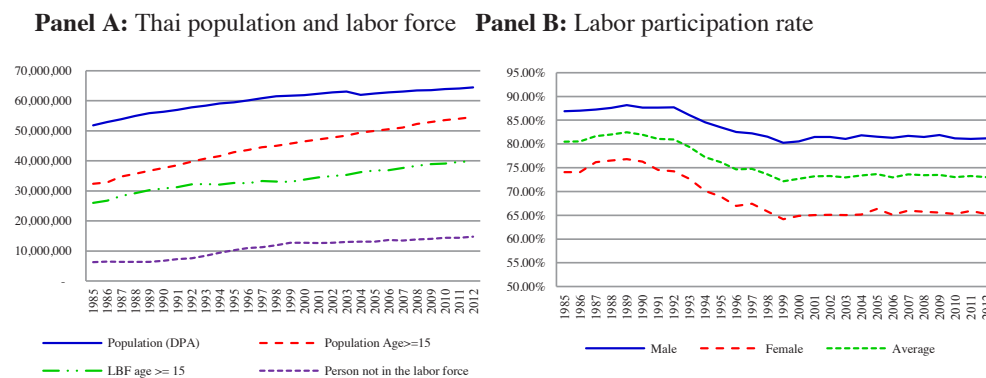
Sources: Calculated from LFS of Thailand collected by NSO, 2013.

In this study we focus on the entry-level labors with the potential experience between 0-5 years. This group of labor is the one who have just graduated or have low experience. We can see that this group has more chance to be laid off from the companies when there is crisis. We can calculate the experience from age - year of schooling - 6 (The children under 6 years old are not yet officially counted into the Thai education system, equivalent to the kindergarten or preschool.) and compare to the experienced group which has experience more than 5 years. If we consider the unemployment rate, we can see that the entry-level labors have the highest unemployment rate at 4-6% in normal time and easily jump to 10-12% during crises or shocks as show in figure 1 panel B. while the average unemployment rate is only 0.72% in 2012 and had never reached 6% during crisis times. On figure 1 panel C we concentrated on the entry-level labor group and found that the college graduate has the highest unemployment rate at about 7%. The unemployment rate jumps to the highest during the crises while the low education group has the unemployment rate around 5% which is close to those of the high school group. We can even see that the highest education group has the highest unemployment rate but people still try to get the education as much as they can because they would like to get more incomes with the higher degree as many studies show that the return on education depends on the education level or year of schooling. However there are some problems on Thai labor market such as mismatching between demand and supply for educated labors and job shopping of new graduates. Then we focus on the entry-level labors who get the direct effect from any changes, policies, crises or shocks.

We divided the data into three major periods by using the Asian Financial Crisis (Tom Yum Kung crisis). The first period (1985 to 1996) calls before crisis (BC) which we separate into two sub-periods, 1985-1990 and 1991-1996 as BC80 and BC90 respectively. The second period is the crisis time or during crisis (DC), 1997-2000. And the third period is after crisis (AC), from 2001 to 2012, which we separate into two sub-periods, 2001-2006 and 2007-2012 as AC1 and AC2 respectively. The way we separate the period will help us see precisely behavior of Thai's labor market in each time.

## 2.1 Overview of Thai labor market

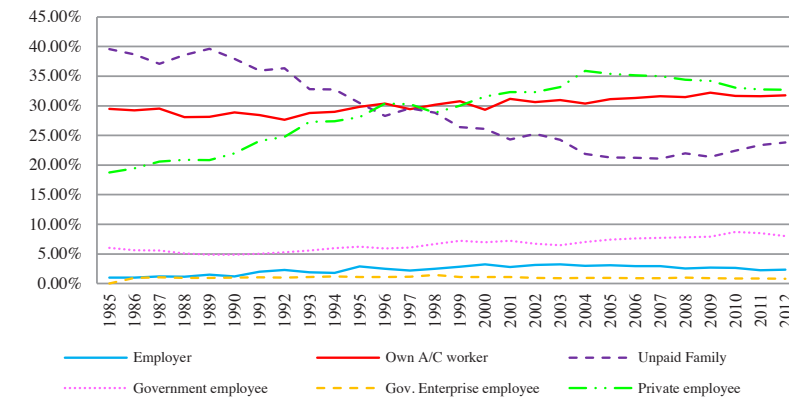
**Figure 2: Population and labor force participation rate of Thailand, 1985-2012.**



Sources: Population data from Department of Provincial Administration (DPA), the labor force and labor participation is calculated from the LFS of Thailand collected by the NSO, 2013.

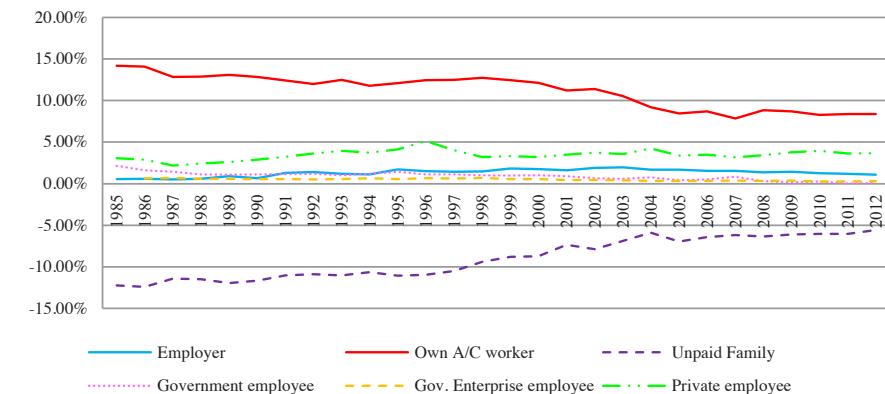
Thailand has the population around 64.46 million in 2012 with 31.70 and 32.76 million of male and female population respectively as shown in figure 2 panel A and panel B. From the NSO information we found that population of Thailand has increased over time while labor force participation rate has decreased, 80.48% in 1985 to 73.00% in 2012 and male has supplied their labor force more than female as in figure 2 panel B. We can see the unemployment rate in figure 1 panel A, before crisis (1997), Thai labor market has unemployment rate only 1.07% as show in figure 1 panel A. During the crisis 1998 to 2001, the unemployment rate has been growing up rapidly to 3.41% and climb down to 2.60% in 2001. After the crisis the unemployment rate has dropped to 1.76% and to 0.58% in 2002 and 2012 respectively. We found that the employment behavior has changed. After the crisis, the unemployment rate of male is greater than female which had never happened. The female employment rate has increased, since then is almost equal to the employment rate of male.

**Figure 3: Proportion of workers by working status of Thai labor market, 1985-2012.**



Sources: Calculated from LFS of Thailand collected by NSO, 2013.

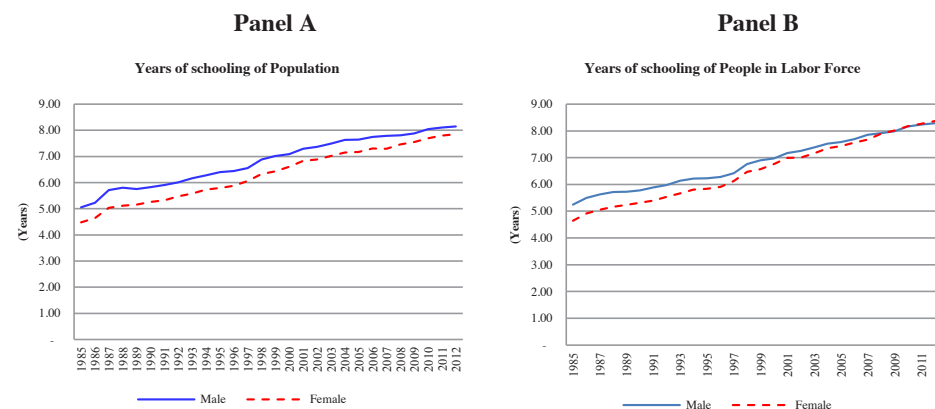
**Figure 4: Different rate of gender proportion of workers by working status, 1985-2012.**



Sources: Calculated from LFS of Thailand collected by NSO, 2013.

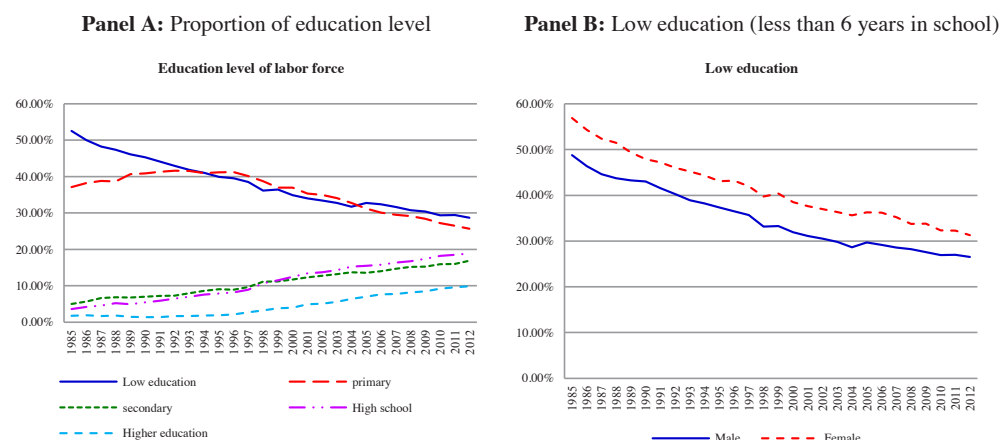
The structure of working status of Thai labor market is shown in figure 3. There are three main sectors; the first sector is private employee, the second sector is own account workers (who operated an enterprise on his own account without employee) and the last one is unpaid family (who works without pay on a farm or in a business enterprise owned or operated by the head of family or by any other family members). Before crisis we found that each main sector has 30% share. After crisis the private employee sector increased to 37% and unpaid family has dropped to 20%. This study analyzes only the earnings of employees of the governments and private sectors (around 45% of Thai labor market). From figure 4, we see that women work for unpaid family more than men (with the negative number) but this trend has sharply declined over time, as the gap of the rate between male and female decreased from -12.22% in 1985 to -5.58% in 2012. Women in unpaid family are moving out to the others. In the other sectors, men join to work more than women especially in the own account worker group where men have higher proportion than women: 14.18% in 1985 and dropped to 8.37% in 2012. For the employer sector, the gap of this proportion between male and female is higher, increasing from 0.55% to 1.95% and dropping down to 1.10% in 1985, 2004 and 2012 respectively. After crisis, women work for government much more than the past and tend to increase over time. This result is correlated with the last session that women tend to work more in service sector. The most of government works are provide services for their population. We observe that women try to have their own businesses which make the different rate of gender proportion lower over time.

**Figure 5:** Average years of schooling of Thai people, 1985-2012.

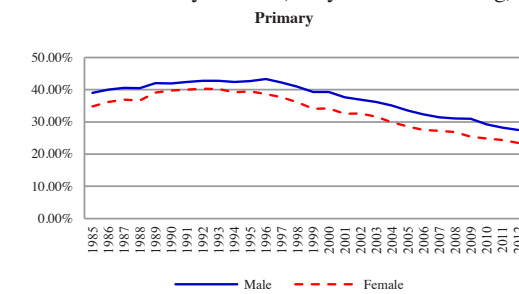


Sources: Calculated from LFS of Thailand collected by NSO, 2010.

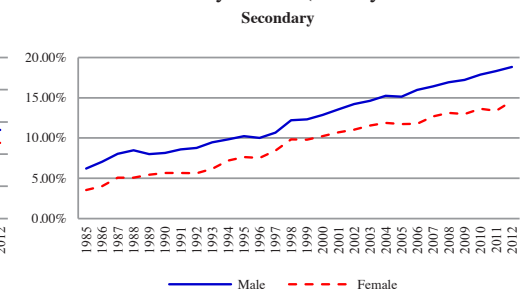
**Figure 6:** Proportion of workers by education level (using year of schooling) and gender of Thai labor market 1985-2012



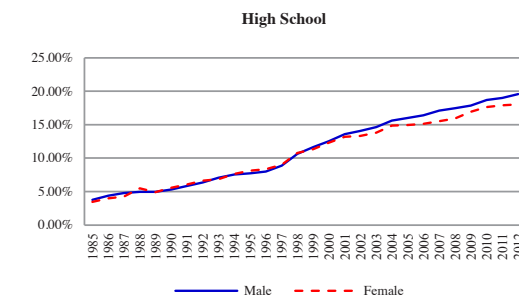
**Panel C:** Primary school (6-8 years of schooling)



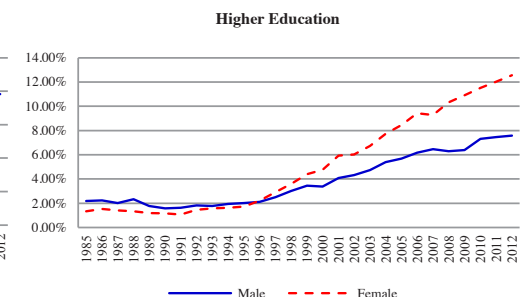
**Panel D:** Secondary school (9-11 years of schooling)



**Panel E:** High school (12-15 years of schooling)



**Panel F:** Higher education (year of schooling ≥ 16 years)

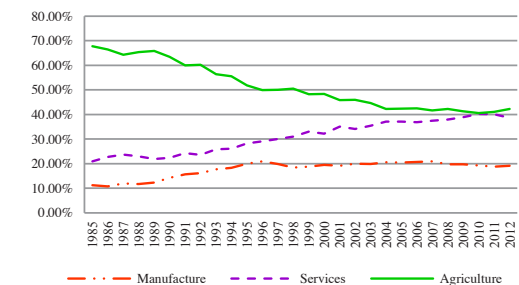


Sources: Calculated from LFS of Thailand collected by NSO, 2013.

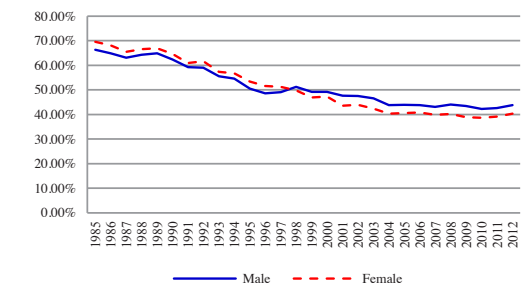
The education for Thai people is very important and it is the main factor to develop the country. In the past, only boys can study with the monks in the temple when girls have to learn about housework at home. We had the first school in a reign of the King Chulalongkorn (King Rama V) in 1871 when the schools were developed for both boys and girls. Since 1932, Thailand had the compulsory education policy for supporting the people to enter school. Since 1936, the compulsory education was 4 years for serving the rapidly country development at that time and then changed to 7 years in 1951. After 1977, the compulsory education was changed to 6 years and in 1999 it was expanded to 9 years and the people have had the right for free education for 12 years since 2002. These policies give the chance to people to get more years of schooling as shown in figure 5 panel A and B. The average years of schooling of Thai people has climbed from 4.76 years in 1985 to 7.99 years in 2012 when the people in those of labor market climbed from 4.97 to 8.32 years in 1985 and 2012 respectively.

**Figure 7:** Proportion of workers by industry and gender of Thai labor market 1985-2012

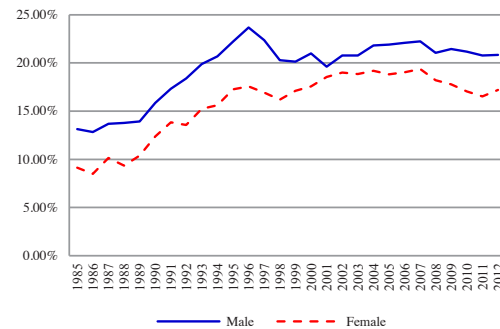
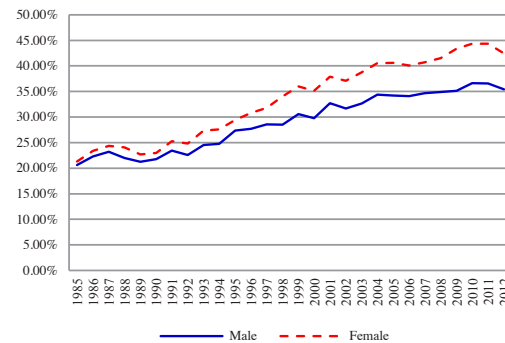
**Panel A:** Proportion of labors by industrial sectors



**Panel B:** Proportion of labors in agricultural sector





**Panel C: Proportion of labors in manufacture sector****Panel D: Proportion of labors in service sector**

Sources: Calculated from LFS of Thailand collected by NSO, 2013.

We group the years of schooling to five education levels, low education (who have years of schooling less than 6 years), primary school (who have 6-8 years of schooling), secondary school (who have 9-11 years of schooling), high school (who have 12-15 years of schooling) and higher education (who have years of schooling more than 15 years). We can see that in 1985, around 72.23% of labors in labor force have low education while labors with higher education were only 2.17% as shown in figure 6 panel A. After the Thai education policy was enforced, the education level of labors in the market has improved. We can reduce the low education labors to 28.71% and increase the higher education to 9.87% in 2012. We can see that the education of the women are less than those of men in primary, secondary and high school as shows in figure 6 panels C-E. When there are higher amount of number of women in lower and higher education as shown in figure 6 panels B and F. From the combination of figure 5 and figure 6 we can observe that women who have high education will enter to labor market.

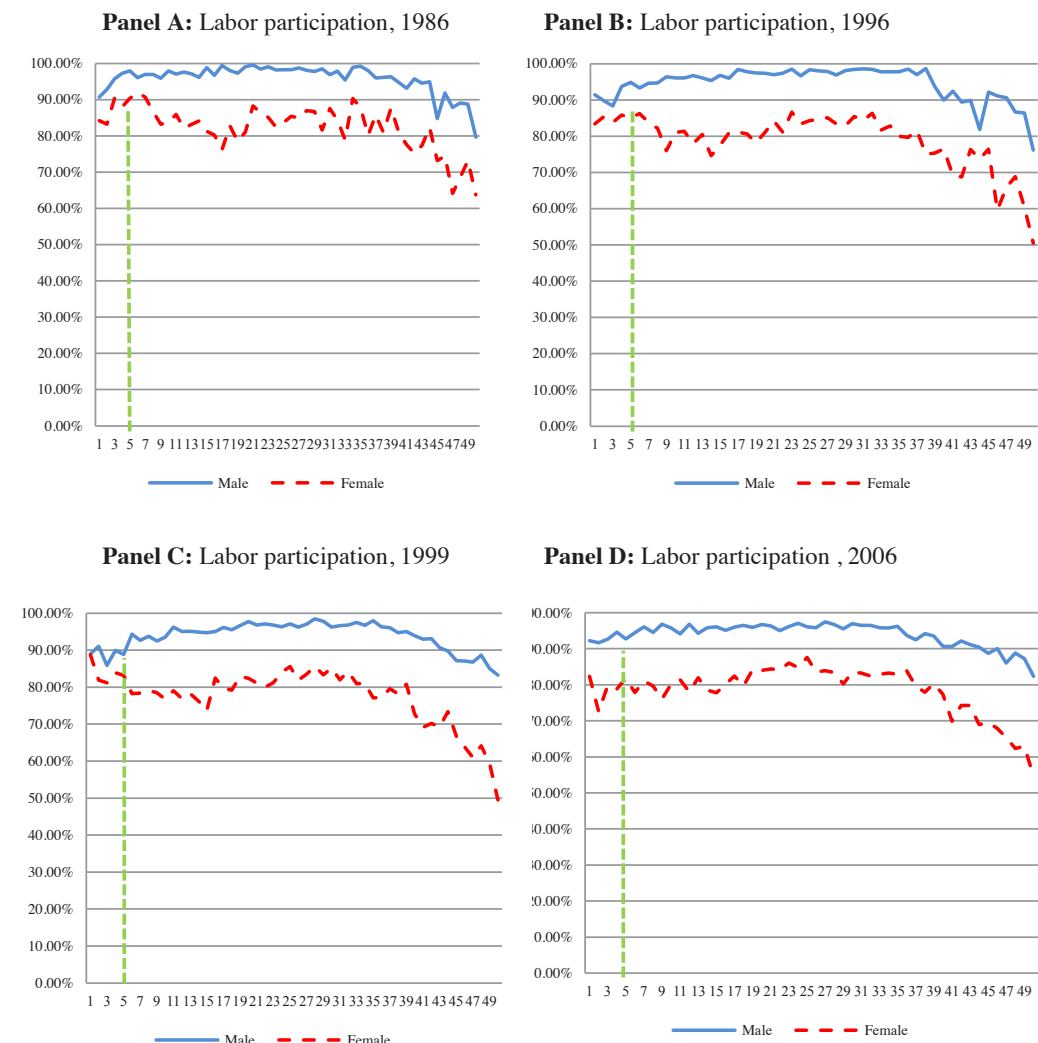
Thailand is gradually changing away from the agricultural country that agriculture is the main sector in the labor market but the trend has declined over time as shown in figure 7 panel A. The agriculture share decreased from around 67.78% in 1985 to 42.22% in 2012. While the labor in agriculture sector is dropping, the labor in services and manufacture sectors are growing up. The labors in services has climbed from 20.92% in 1985 to 38.62% in 2012 when the labor in manufacture sector has also increased and nearly stable after the crisis. It was increased from 11.30% in 1985 to 20.93% in 1996 and dropped to 18.44% in 1998. Then it increase a little bit and almost stable at around 20% since 2002. If we consider to the labor participation in panel B, in 1985 ratio of women worked in agriculture sector more than ratio of men (69.57% vs. 66.26%, respectively) since the crisis this ratio was changed ratio of men worked in the agricultural sector more than ratio of women (43.78% and 40.38% in 2012, respectively). We found that ratio of women worked in the services sector more than ratio of men and the number of women in this sector increased with higher rate as shown in panel D. Men worked for manufacture sector more than women. The number of men in this sector dropped very sharply during the crisis but the men still have higher share than women as shown in panel C.

## 2.2 Entry-level labors vs. experienced labors

This paper we separate the data into two groups by using the potential experience. The first group is called entry-level labors who have only 0-5 years of potential experience and the other group is experienced who have more than 5 years of experience in the labor

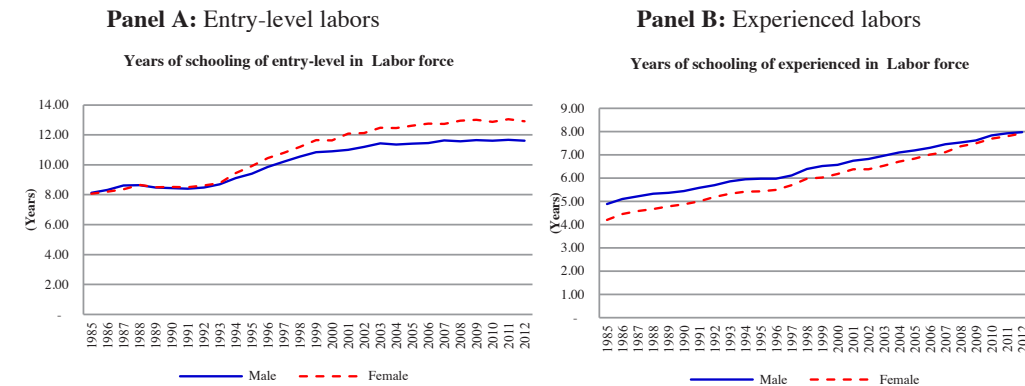
market for analyzing the gender discrimination or gender earning inequality. We found that the trend of labor participation at the first 5 years of experience the labor participation gap between men and women are not much different (the gap varies between 0-8%) as shown in figure 8 panel A-D and the gap is greater after 5 years of experience (10%-20%) as shown in panel C. Then we expect that the gender earning gap should not be much different which is consistent with the other studies such as Bertrand et al. (2010) and Manning & Swaffield (2005) who reported that the gender gap among the early-career or entry-level workers are quite small in both the United States and the United Kingdom, respectively. However, the figures indicate that women have less labor participation than men in the labor market which could be due to the norm of Thai culture that women have to take care of family members.

**Figure 8:** Labor participation of labor force by the years of experience in 1986, 1996, 1999 and 2006



Sources: Calculated from LFS of Thailand collected by NSO, 2013.

**Figure 8:** Average years of schooling of entry-level labors and experienced labor, 1985-2012

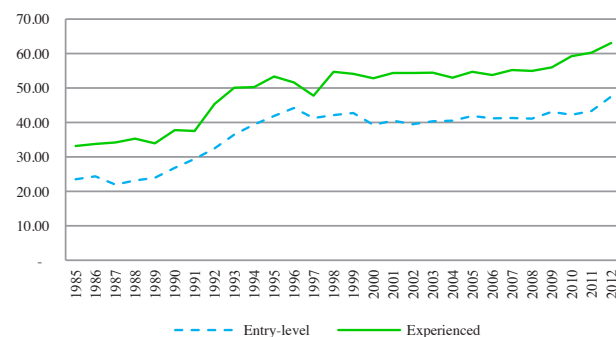


Sources: Calculated from LFS of Thailand collected by NSO, 2013.

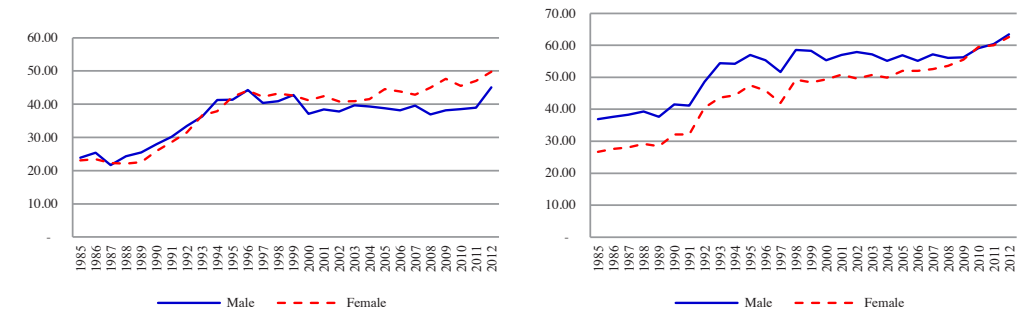
There are many interesting features in entry-level group such as unemployment rate in figure 1 panel B or general gender gap in topic of return on education (Warunsiri and McNown, 2010) and marital status (Buchmueller, 1996) that has been studied in previous works. We start with the comparison the experienced and entry-level features on the year of schooling, real earning per hour, marital status and real earning per hour by marital status. We found that the years of schooling of entry-level labors grow from 8.09 years in 1985 to 12.22 years in 2012 while those if the experienced labors have grown from 4.56 to 7.95 years respectively. And in the entry-level group, women have higher years of schooling than men and the gap is broader over time as show in figure 8 panel A. The average year of schooling of the experienced group, women have lower years of schooling and tend to increase gradually as in panel B. It means that on average, entry-level labors get more years of schooling than the experienced group which is a result from the compulsory education policies. Moreover, young Thai women get higher education than men since 1989.

**Figure 9:** Average earning per hour of entry-level labors and experienced labor, 1985-2012

**Panel A:** Real earning per hour of Full time workers by experience



**Panel B:** Earning per hour of entry-level labor **Panel C:** Earning per hour of experienced labor



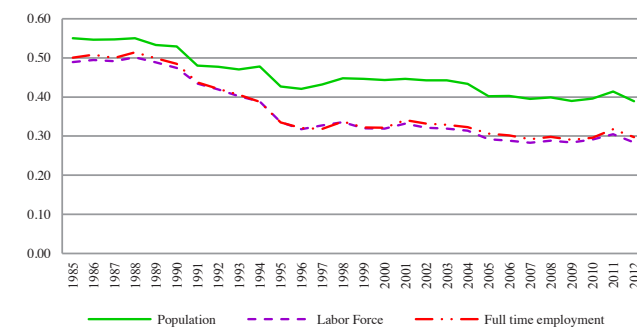
Sources: Calculated from LFS of Thailand collected by NSO, 2013.

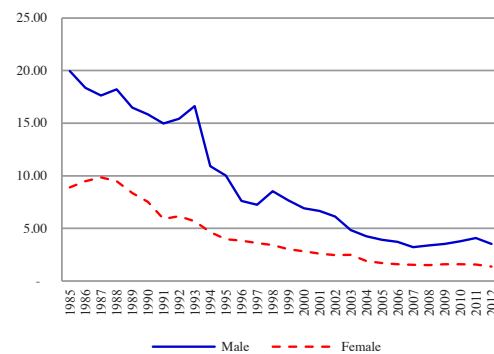
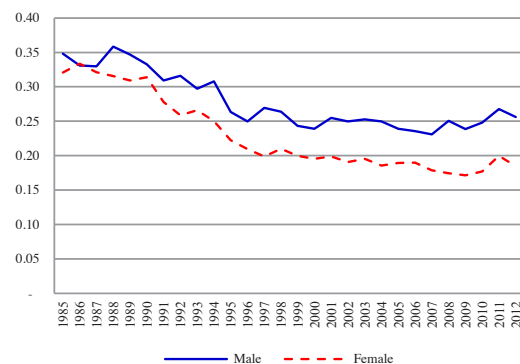
Even though the entry-level group has higher education but when they enter to labor market, only the education could not help them to get the job. In addition, during crises this group was the first group has to be laid off or unemployed, with highest unemployment rate as show in figure 1. In 1987, the Black Monday crisis, the unemployment rate of the entry-level group jumped to 11.46% and increased to 10.04% during the Asian Financial crisis in 1998. Normally they have 5% unemployment rate which is higher than those of the others 4.0%. Therefore the job security for this group is very sensitive to any policies, shocks or crises. In addition, this could reflect the efficiency of Thai education system or shed light on the new trend of Thai labor market that start shopping for the jobs.

It is the fact that earnings of entry-level labors are lower than those of the experienced labors as show in figure 9. There are also differences on the trend of gender earning gap as shown in figure 9 panel B and C which show that the earning per hour of women in experienced group are catching up with the men while the entry-level labors, women earn more than men since 1999. These trends are related to the trend of years of schooling in figure 8. Our study shows the new trend of gender gap in entry-level labors which are different from the other previous studies which found only gender earning gap tend to be lower over time.

**Figure 10:** Share of single to married in Thai labor market, 1985-2012

**Panel A:** Share of single to married in labor market

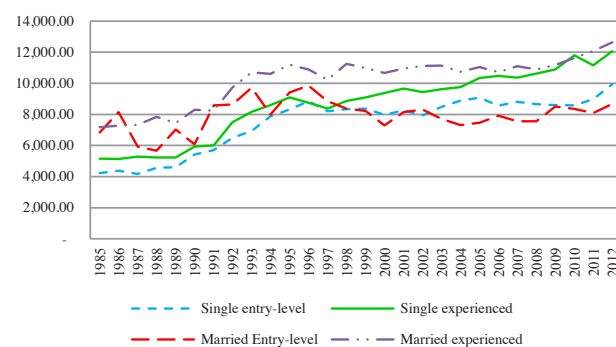
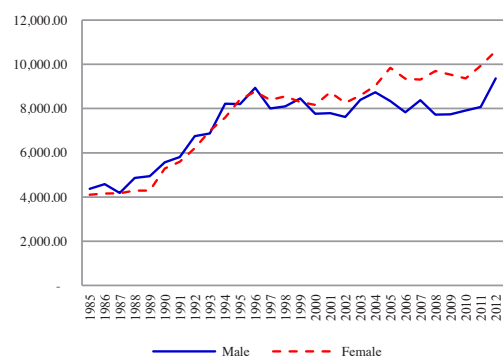
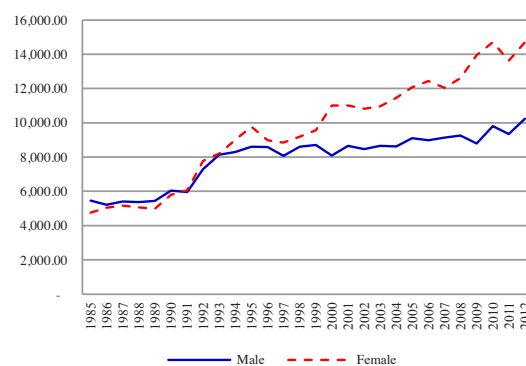
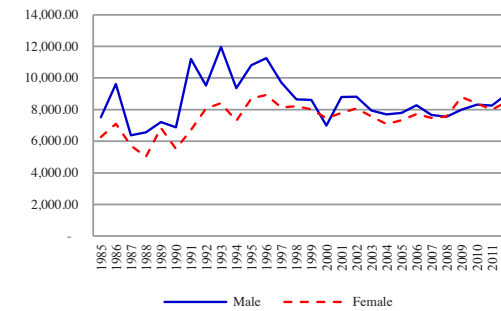
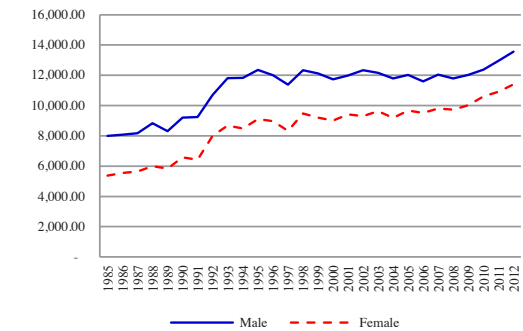


**Panel B: Share of single to married, entry-level workers****Panel C: Share of single to married, experienced workers**

Sources: Calculated from LFS of Thailand collected by NSO, 2013.

The marital status is a main factor that has made males and females have the different earnings. From the data, we found that people decide to get married more than the last decade, for risk-sharing or any other reasons, especially in the entry-level group as show in figure 10, panel C. For all population in panel A, we found that share of single to married is at 0.55 in 1985 and drops to 0.39 in 2012 while the number in labor force is around 0.49 and 0.28 respectively. The share of single to married in the entry-level group is 12.74 in 1985 and drops to 2.16 in 2012 and the share of single to married in the experienced group is dropping down a little bit and close to stable at around 0.20 as shown in panel D.

**Figure 11:** Average real earning per month of entry-level labors and experienced labor by marital status, 1985-2012

**Panel A: Earning per month of fulltime employment by marital status and experience.****Panel B: Earning of single entry-level workers****Panel C: Earning of single experienced workers****Panel D: Earning of married entry-level workers****Panel E: Earning of married experienced workers**

Sources: Calculated from LFS of Thailand collected by NSO, 2013.

From figure 11 panel A, we observe that the behavior of the market was changed after crisis. Before 1997 both married experienced labors and married entry-level labor were got earning more than single labors but after that the experienced labors were get more earning than entry-level labors. We found that single females in both entry-level and experienced groups have higher earning per month than single males as panels B and C. Especially single experienced females can earn more than single experienced males and the gap between them increase overtime as panel C. Moreover, we can observe that the earning of single males in both groups is not much different as shown in panels B and C. In the married group, we can observe that males earn more than females especially in the experienced group as shown in panels D and E. Due to the fact that married women have high probability to face with the market interruption under the family lives especially to give birth and take care of their family members. This could make the employers to expect that married women will be less productive at work which made them get lower earnings than men. As the old Thai culture, married men have to work for raising their families when women have to quit the job or allocate more time to look after members of family. Then married men have to push more effort to work and try to earn more for their families. Our paper will focus on the impact of the marital status to the earning inequality for finding the reason behind the gender gap. We study the earning inequality by using the Blinder-Oaxaca decomposition and semi-parametric decomposition to study more detail of the inequality in each group.

### 3. Gender gap detectors

There are many approaches to measure the gender earning inequality such as common earning inequality metrics, parametric and non-parametric decomposition etc. One of the most extensively used methods is a decomposition method by Blinder-Oaxaca (BO) was first studied by Blinder (1993) and Oaxaca (1993). From the limitation of the BO which consider only mean values of the data, then the decomposing distribution methods are developed by Juhn, Murphy and Pierce (1993) and DiNardo, Fortin, Lemieux (1996), Firpo, Fortin and Lemieux (2009) and Fortin, Lemieux and Firpo (2011). Many literatures follow these approaches as Sierminska Frick and Grabka (2008) used the regression-based techniques the Juhn, Murphy & Pierce decomposition and semi-parametric method as DiNardo-Fortin-Lemieux (DFL) to find the gender wealth gap in Germany, Lathapipat (2008) and (2009) study the changes educational distribution and its impact on the evolution of wages in Thailand during 1987-2006 by using the Recentered Influence Function (RIF) of Firpo- Fortin-Lemieux and Nakvachara (2010) use the BO and DFL to study the gender gap in Thailand. In this study, we follow to the BO and DFL decomposition for finding the parametric and semi-parametric results as shown in the next section.



3.1 Blinder - Oaxaca Decomposition

We follow the standard Mincer (1974)'s earning equation

y\_ig = X\_ig beta\_g + epsilon\_ig (1)

when X\_ig is the observation on the explanatory variables which includes year of schooling, age and age-squared, i = 1, 2, 3, ..., N\_g, and Sigma\_g N\_g = N, y is the log hourly earnings, beta is the beta coefficient or gender wage structure that we can find from the ordinary least square which is estimated for g groups, male (m) and female (f), and epsilon is the residual. Blinder (1973) and Oaxaca (1973) presented the decomposition

y\_bar\_m - y\_bar\_f = [E\_beta\_m(y\_im | X\_im) - E\_beta\_m(y\_if | X\_if)] + [E\_beta\_m(y\_if | X\_if) - E\_beta\_f(y\_if | X\_if)] = (X\_bar\_m - X\_bar\_f) beta\_hat\_m + X\_bar\_f (beta\_hat\_m - beta\_hat\_f) (2)

when y\_bar\_g = Sum\_{i=1}^{N\_g} y\_ig / N\_g and X\_bar\_g = Sum\_{i=1}^{N\_g} X\_ig / N\_g. The first term on the right hand side of equation (2) shows the differences in the observable characteristics between groups or explained part, the second term shows the differences in coefficient estimates or unexplained part which can well be a result of gender discrimination.

Following Neumark (1988), we will use returns to schooling from pooled data, beta\_hat\_a as the reference return. Then we are added and deducted the terms X\_bar\_m beta\_hat\_a and X\_bar\_f beta\_hat\_a to equation (2) and rearrange as

y\_bar\_m - y\_bar\_f = Delta y = (X\_bar\_m - X\_bar\_f) beta\_hat\_m + X\_bar\_f (beta\_hat\_m - beta\_hat\_f) + X\_bar\_m beta\_hat\_a + X\_bar\_f beta\_hat\_a - X\_bar\_m beta\_hat\_a - X\_bar\_f beta\_hat\_a = (X\_bar\_m - X\_bar\_f) beta\_hat\_a + X\_bar\_m (beta\_hat\_m - beta\_hat\_a) + X\_bar\_f (beta\_hat\_f - beta\_hat\_a) = Delta X\_bar beta\_hat\_a + X\_bar\_m Delta beta\_hat\_m + X\_bar\_f Delta beta\_hat\_f (3)

The first term is the explained part which can explain by the observable characteristics. The rest are the unexplained part or residual gap which consist of the advantage of males and the disadvantage of female on the second and the third terms respectively. Then if there is no gender gap in the return of male and female, we can see that both groups will get the same wage or the difference of beta close to zero. If men are more favorable in the market, the second and the third terms will be positive but we can see that sometime these terms are negative which means males could not take advantage from their attributes or females are being more favorably compensated compared to the pooled wage. In this study we use the equation (3) for analyzing the data and get the results as discussed the following section.

3.2 The BO decomposition results

Again, we decide to separate the data into three periods based on the 1997 financial crisis. These groups belongs to the period before crisis, in 1985-1990 (BC80) and 1991-1996 (BC90), one group during crisis, 1997-2000 (DC) and two groups after crisis, 2001-2006 (AC1) and 2007-2012 (AC2). We found that the economy on each period is different even within the periods before crisis. During 1985-1990 were the period of development, the GDP (NESDB 2015) on this period was growing very fast and touch the highest GDP growth at 13.29 in 1988. After that, during 1991-1995, the GDP growth was around 8. During the period of crisis, 1997-2000, Thailand faced with the negative GDP growth shock and the economics recovered after that. There are three groups of labor that we analyze in this study, all fulltime workers, experienced and entry-level workers. The BO decomposition results are shown in table 1. We found that on average of fulltime workers, the total gap, column (6), between men and women decrease over time; 32.04, 21.59, 14.23, 8.15 and 2.05 in BC80,

BC90, DC, AC1 and AC2 respectively. The trend is almost the same in experienced workers, from 34.39 in BC80 to 4.29 in AC2. We can see that the total gap of the entry-level labor is very low and had negative sign, 7.78 to -16.78 in BC80 to AC2 respectively. This means that the average earning gap between men and women in the entry-level labors is lower than experienced labors at the same time. And the results show that after BC80, women got higher earning than men under the same characteristics and this gap tends to increase over time.

Table 1: Blinder-Oaxaca (1973) results of LFS, 1985-2012.

Condition (1)	Explained gap (2)	Unexplained gap			Total Gap (6)
		Total (3)	Advantage of Male (4)	Disadvantage of Female (5)	
<i>All fulltime workers</i>					
BC (1985-1990)	0.0728	0.2476	0.1012	0.1464	0.3204
BC (1991-1996)	0.0162	0.1997	0.0822	0.1175	0.2159
DC (1997-2000)	-0.0093	0.1516	0.0655	0.0861	0.1423
AC (2001-2006)	-0.0544	0.1359	0.0605	0.0754	0.0815
AC (2007-2012)	-0.0966	0.1171	0.0528	0.0643	0.0205
<i>Experienced workers</i>					
BC (1985-1990)	0.0759	0.2681	0.1050	0.1631	0.3439
BC (1991-1996)	0.0272	0.2151	0.0854	0.1297	0.2424
DC (1997-2000)	0.0074	0.1619	0.0676	0.0944	0.1693
AC (2001-2006)	-0.0306	0.1417	0.0610	0.0807	0.1111
AC (2007-2012)	-0.0809	0.1238	0.0545	0.0692	0.0429
<i>Entry-level workers</i>					
BC (1985-1990)	-0.0174	0.0952	0.0490	0.0463	0.0778
BC (1991-1996)	-0.0876	0.0724	0.0374	0.0350	-0.0152
DC (1997-2000)	-0.1016	0.0274	0.0147	0.0127	-0.0742
AC (2001-2006)	-0.1489	0.0272	0.0146	0.0126	-0.1216
AC (2007-2012)	-0.1750	0.0072	0.0038	0.0034	-0.1678

These results are related to the figure 10 because BO using the mean value of the data to calculate. The explained gap, in column (2), if the value is positive mean that men had more favorable or the observable characteristics of men make them get better earning. From the results, only in BC80 and BC90 are positive and after that the observable characteristic of women are more attractive. The results of entry-level labors are completely negative, from -1.74 to -17.50 in BC80 to AC2 respectively, which mean the observable characteristic of women in this group are better than men and tend to better over time. These results are connected to the mean values of the data that show characteristic as years of schooling of women better than men over time. The unexplained gaps which imply to the gender discrimination consist of column (4) and column (5). Total unexplained gap, column (3), is also decline over time, for experienced labor change from 26.81 to 12.38 and entry-level labors change from 9.52 to 0.72 from BC80 to AC2 respectively. But from the results could not show precisely that females can take advantage form males even in the entry-level labors because the value of unexplained gap in column (4) and (5) are not negative at the same time. Then we can conclude that males can take advantage of females or males are being more favorably compensated and females could not take advantage of males or females are being less favorably compensated compare with the referenced pay structure in both experienced and entry-level labors. And gender discrimination or gender gap in Thai labor market tends to be lower over time.



From the BO decomposition results under the same attributes of years of schooling, age, age-square and potential experience show that women are more favorable over time especially in the entry-level labors who that women have more year of schooling than those of men. We wonder that if the market did not discriminate females at the beginning, why after they have more years of experience the data show males are more favorable than females even though the trend is declined. Then we check with the marital status for finding the supporting reason to explain our observation. We focus on the single and married workers in each group of labors. The results of BO decomposition are shown in table 2. The total gap, column (6), of married labors in each group is declined over time same as the results in previous table when the single labors' earning dominated by women after BC80 and tend to make wider gap in both experienced and entry-level group of labors. In single entry-level labors group, the total gap is 8.08, -3.15, -9.49 and jump to -18.44 and -25.87 in AC1 and AC2 respectively. These values imply that women earn more than men as show in equation (3). The explained gap, column (2), shows that the observable characteristics of women in the single labors are better than men in both groups as the results show negative value of explained gap and vice versa for married group. As the previous results, value of unexplained gap in column (4) and (5) are not negative at the same time before the crisis. Then we can conclude that married or single males can take advantage of married or single female respectively or married or single males are being more favorably compensated than females only in the period of before crisis. But after crisis we found that single women can take advantage of single men both in experienced and entry-level labors and tend to take more advantage over time.

**Table 2:** Blinder-Oaxaca (1973) results of LFS, 1985-2012 by marital status.

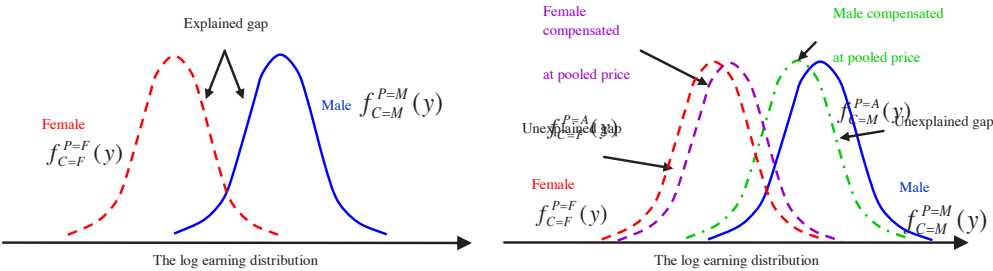
Condition (1)	Explained gap (2)	Unexplained gap			Total Gap (6)
		Total (3)	Advantage of Male (4)	Disadvantage of Female (5)	
<i>Single experienced workers</i>					
BC (1985-1990)	-0.0458	0.1592	0.0729	0.0863	0.1134
BC (1991-1996)	-0.1279	0.1021	0.0437	0.0584	-0.0259
DC (1997-2000)	-0.1765	0.0486	0.0209	0.0277	-0.1279
AC (2001-2006)	-0.2794	-0.0078	-0.0033	-0.0045	-0.2872
AC (2007-2012)	-0.3489	-0.0250	-0.0103	-0.0147	-0.3739
<i>Single entry-level workers</i>					
BC (1985-1990)	-0.0190	0.0998	0.0505	0.0492	0.0808
BC (1991-1996)	-0.0992	0.0678	0.0337	0.0340	-0.0315
DC (1997-2000)	-0.1247	0.0298	0.0153	0.0145	-0.0949
AC (2001-2006)	-0.2134	0.0290	0.0143	0.0146	-0.1844
AC (2007-2012)	-0.2538	-0.0049	-0.0023	-0.0026	-0.2587
<i>Married experienced workers</i>					
BC (1985-1990)	0.0961	0.2897	0.0975	0.1923	0.3859
BC (1991-1996)	0.0805	0.2332	0.0840	0.1492	0.3137
DC (1997-2000)	0.0759	0.1749	0.0674	0.1075	0.2508
AC (2001-2006)	0.0521	0.1665	0.0681	0.0984	0.2186
AC (2007-2012)	0.0102	0.1478	0.0630	0.0848	0.1580
<i>Married entry-level workers</i>					
BC (1985-1990)	0.1020	0.0748	0.0425	0.0323	0.1768
BC (1991-1996)	0.1028	0.1226	0.0766	0.0460	0.2254
DC (1997-2000)	0.0131	0.0234	0.0148	0.0087	0.0365
AC (2001-2006)	0.0042	0.0281	0.0182	0.0099	0.0323
AC (2007-2012)	-0.0309	0.0263	0.0165	0.0097	-0.0047

The results confirm that single women can allocate their time to work more than married women who face with market interruption, due to fertility. In addition, the single women dominate the single men's earning over time for both experienced and entry-level group under the observable characteristics. Even now we can conclude that single women can take advantage of single men. But we would like to make sure that these results are clearly observed. Then we have to test by using the other method. Because the BO decomposition is calculated by using only the mean values of the data then we could not see the entire earning distribution. Next sections, we decide to use the semi-parametric decomposition to analyze entire distribution and check the counterpart.

### 3.3 Semi-parametric decomposition

**Figure 12:** The log earning distribution and the gender gap.

**Panel A:** log earning distribution of male and female **Panel B:** log earning distribution and their counterfactual



The DiNardo-Fortin-Lemieux (DFL) decomposition had proposed a method to study the wage inequality. We modified DFL approach by using the pooled price and there are the gender gaps as shown in the figure 12 panel A the gender gap is the length between two curves of the gender distribution. We have to construct the counterfactual for simulation as if women were compensated at the pooled price. The different in the gender counterfactual earning densities is the gender disparity from observable characteristics or explained gap and the different between the each gender counterfactual earning density and gender earning density is the dissimilar from the unobservable attribute or unexplained gap as shown in figure 12 panel B. To analyze with semi-parametric decomposition we can see the entire distribution of the data that we use in each group which show more precisely than using only the average data as in BO decomposition.

This section start with the earning density by using the kernel density estimator  $f(y)$  of Rosenblatt (1956) and Parzen (1962) in equation (4),  $y_i$  is the log earning per hour,  $\omega_i$  is the survey weight,  $n$  is the number of the observation,  $h$  is the band width and the kernel function (K). We can build respectively the males and females earning density by using the equation (5) and (6) respectively.

$$\hat{f}_h(y;h) = \sum_{i=1}^n \frac{\omega_i}{h} K\left(\frac{y-y_i}{h}\right) \quad (4)$$

$$\hat{f}^M(y;h) = \sum_{i=1}^{n_M} \frac{\omega_i}{h} K\left(\frac{y-y_i}{h}\right) \quad (5)$$

$$\hat{f}^F(y;h) = \sum_{i=1}^{n_F} \frac{\omega_i}{h} K\left(\frac{y-y_i}{h}\right) \quad (6)$$

The marginal density of earnings of all workers ( $f(y)$ ) can be written in terms of the joint density between earnings and observable characteristics of workers ( $f(y, x)$ ) integrated over the domain of all possible vectors of the attributes ( $\Omega_x$ ). The joint density can be replaced by the conditional density of earnings ( $f(y|x)$ ) multiplied by the marginal density of the attributes ( $g(x)$ ) as show in the equation (7).

$$\begin{aligned} f(y) &= f(y; P = A; C = A) \\ &= \int_{x \in \Omega_x} f(y, x) dx \\ f(y) &= \int_{x \in \Omega_x} f(y|x) g(x) dx \end{aligned} \quad (7)$$

After that we create the male counterfactual earnings density which is the distribution of male earnings if their observable characteristics were compensated based on the pooled wage structure as equation (8). We need to modify the equation (7) by using set of attributes that are integrated over males. Then the marginal density of the attributes of all workers,  $g(x)$ , is replaced by the marginal density of the attributes of male workers,  $g_M(x)$  and  $g_F(x)$  for the marginal density of the attributes of female workers in equation (9). Then we can construct the males and females counterfactual earning density. These densities show the earning that men or women should to get if their observable characteristics were compensated with the pooled wage structure.

Male

$$\begin{aligned} f_{C=M}^{P=A}(y) &= f(y; P = A; C = M) \\ &= \int_{x \in \Omega_x} f(y|x) g_M(x) dx \\ &= \int_{x \in \Omega_x} f(y|x) \frac{g_M(x)}{g(x)} dx \\ f_{C=M}^{P=A}(y) &= \int_{x \in \Omega_x} f(y|x) \psi^M \cdot g(x) dx \end{aligned} \quad (8)$$

Female

$$\begin{aligned} f_{C=F}^{P=A}(y) &= f(y; P = A; C = F) \\ &= \int_{x \in \Omega_x} f(y|x) g_F(x) dx \\ &= \int_{x \in \Omega_x} f(y|x) \frac{g_F(x)}{g(x)} dx \\ f_{C=F}^{P=A}(y) &= \int_{x \in \Omega_x} f(y|x) \psi^F \cdot g(x) dx \end{aligned} \quad (9)$$

Follow DFL reweighing procedure, we use  $\psi^M, \psi^F$  as the male and female reweighing parameter respectively which can be simplified using Bayes's rule:

$$\begin{aligned} \psi^M &= \frac{g_M(x)}{g(x)} = \frac{g(x|C=M)}{g(x)} \\ \psi^M &= \frac{P(C=M|x)}{P(C=M)} \end{aligned} \quad (10)$$

$$\begin{aligned} \psi^F &= \frac{g_F(x)}{g(x)} = \frac{g(x|C=F)}{g(x)} \\ &= \frac{P(C=F|x)}{P(C=F)} \\ \psi^F &= \frac{1 - P(C=M|x)}{P(C=F)} \end{aligned} \quad (11)$$

The probability term,  $P(C = MIX)$ , can be estimated from a logit or probit regression and our study choose to estimate by logit regression (which not give different results from probit regression). The terms  $P(C=M)$  and  $P(C=F)$  is the proportion of male or female workers that we can calculate from the data. After we estimate the reweighing parameters ( $\hat{\psi}_i^M$  and  $\hat{\psi}_i^F$ ), then we can modify the standard kernel density estimation for using as the counterfactual earnings density functions of males and females as equation (12) and (13) respectively. Then we can see that “what should the density of earnings per hour of each gender has been if workers' attributes had remained at the average earning?”

$$\hat{f}_{C=M}^{P=A}(y; h) = \sum_{i=1}^n \frac{\omega_i \hat{\psi}_i^M}{h} K\left(\frac{y - y_i}{h}\right) \quad (12)$$

$$\hat{f}_{C=F}^{P=A}(y; h) = \sum_{i=1}^n \frac{\omega_i \hat{\psi}_i^F}{h} K\left(\frac{y - y_i}{h}\right) \quad (13)$$

After we get the counterfactual density we try to find the statistical test for two densities divergence to make sure that the new density is difference from the old one. We using the Kullback and Leibler (1951) for testing the densities distance as equation (14).

$$J_{12}(w) = \int_0^\infty [f_1(w) - f_2(w)] \ln \frac{f_1(w)}{f_2(w)} dw \quad (14)$$

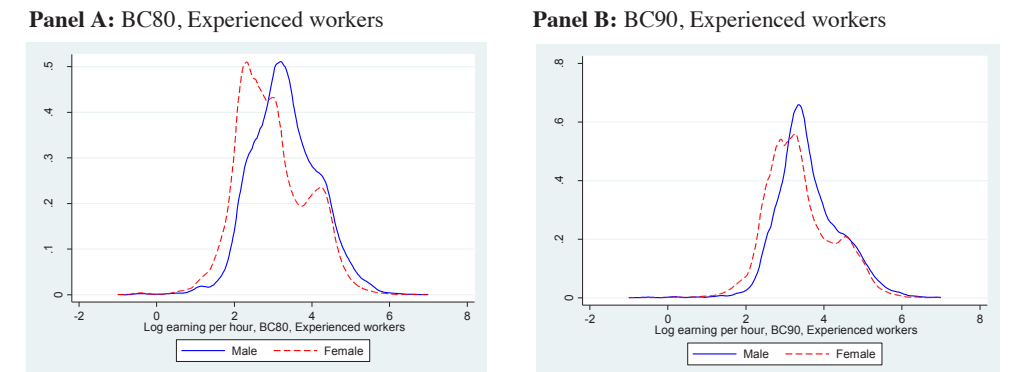
when  $J_{12}$  is the Kullback and Leibler (KL) statistical measurement,  $f_1$  is the density of male or female,  $f_2$  is the density of counterfactual male or counterfactual female. Then we test the goodness of fit by using chi-square with p-value. The KL distances tell us about the distance between 2 densities and tell us that these densities close to be the same one or not.

### 3.4 Semi-parametric decomposition results

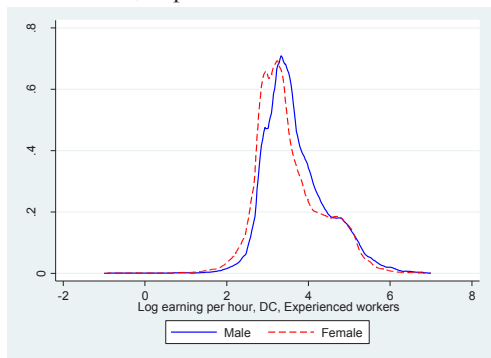
From the DFL results we will observe the earning density of each gender and then we will test the different between the densities for making sure that there are statistically different by using the KL-distance. Moreover we can see the trend of the distances that are lower or less gender difference. On this stage we observe the data by separating into four groups at each period, the first group is different of actual earning density of each gender which shows the total gap from the KL-distance results. The second group is the difference between the counterfactual densities of each gender which tell us about the explained gap us

ing the KL-distance. We expect to see the gender gaps are lower overtime in any condition. Next, we observe the differences between actual and counterfactual densities of males and female on each period. We use KL-distance to check the gender gap by marital status for finding the factor of gender discrimination.

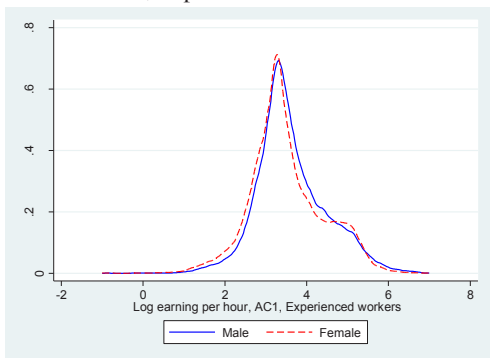
**Figure 13:** Earning density of males vs. females in each period of experienced workers and entry-level workers.



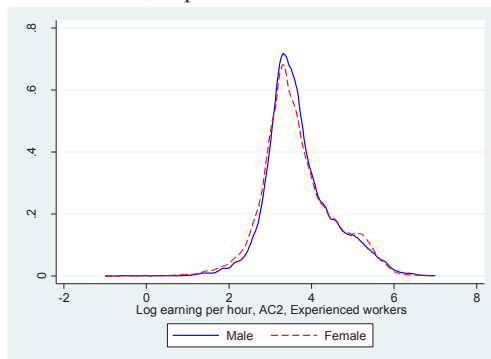
Panel C: DC, Experienced workers



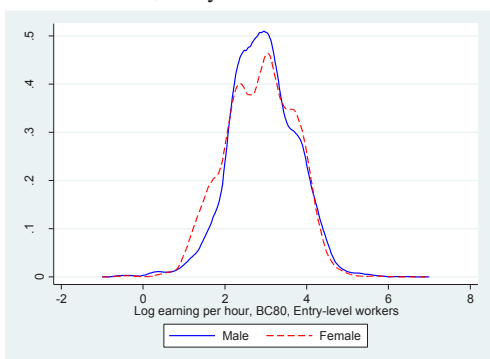
Panel D: AC1, Experienced workers



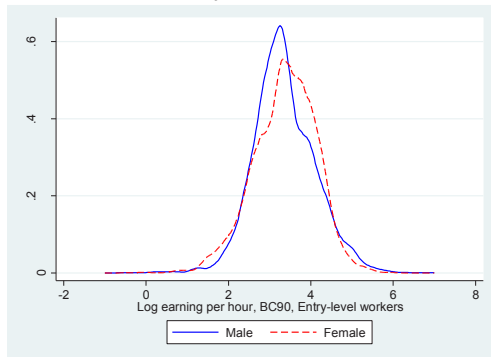
Panel E: AC2, Experienced workers



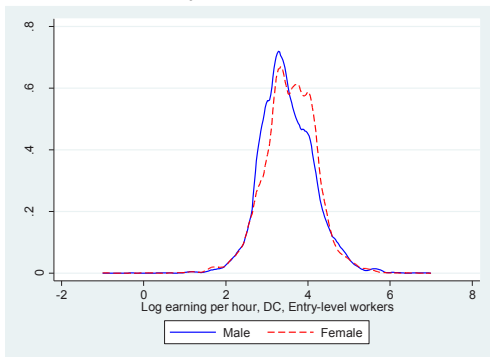
Panel F: BC80, Entry-level workers



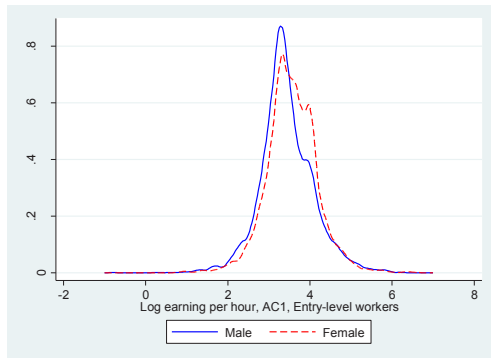
Panel G: BC90, Entry-level workers



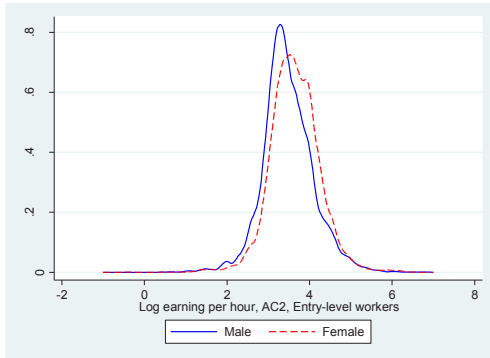
Panel H: DC, Entry-level workers



Panel I: AC1, Entry-level workers



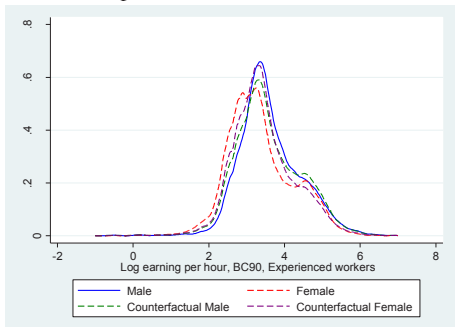
Panel J: AC2, Entry-level workers



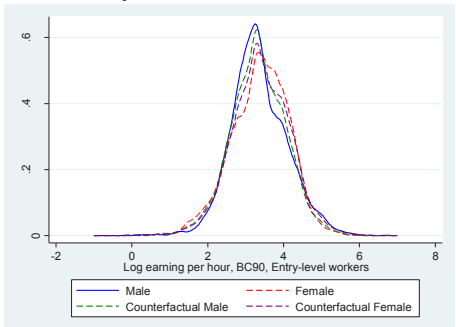
The semi-parametric decomposition shows the gender earning density as shown in figure 13. We can see that the experienced labors are dominated by males as in figure 13 panel A, B, and C. Their earning distributions are on the right hand side of the females in every period which mean males earn more than females but the gap is lower over time. For the entry-level labors group, we observe that the most of distribution in BC80 shows that males earn more than females, figure 13 panel F. In BC90 and DC, figure 13 panel G and H, at the middle earning level show that female earn more. After the crisis period, density distribution is switched which suggest that females earn more than males for almost entire the distribution as shown in figure 13 panel I and J. KL-distances, table 13, show that each pair of earning densities (column 5) is significantly difference and tend to lower distance over time (column 5). But entry-level group has longer distance over time from the result of earning of women greater than men. We can observe that most of the gender gap is come from the unexplained attributes or gender discrimination in experienced workers. But we found that most of gender gap in entry-level workers is come from the observable characteristics and gender gaps are growing over time.

Figure 14: Example of Earning density and their counterfactual with KL distance experience vs. entry-level labors, BC90.

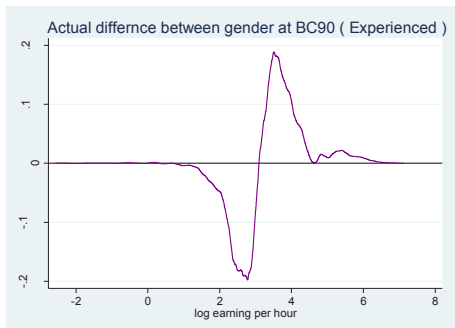
Panel A: Earning and counterfactual density Experienced workers



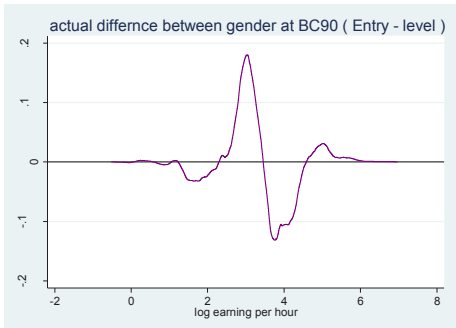
Panel B: Earning and counterfactual density, Entry-level workers



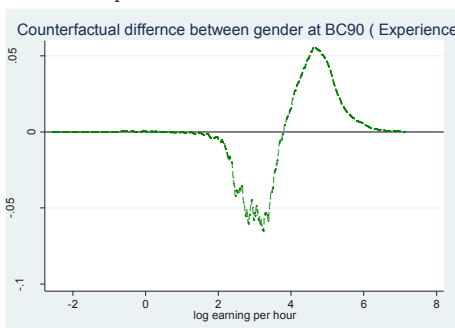
Panel C: KL distance of earning density, Experienced workers



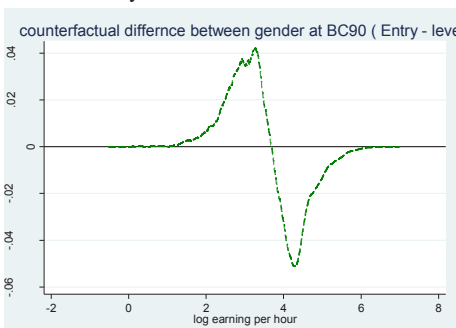
Panel D: KL distance of earning density, Entry-level workers

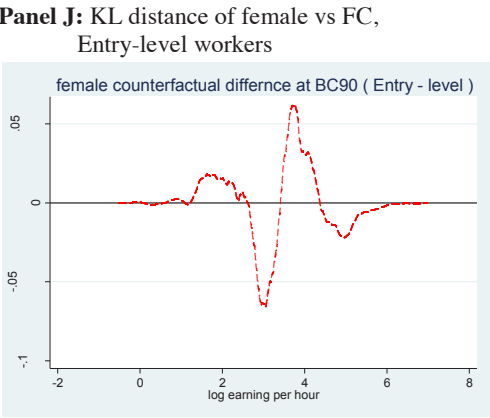
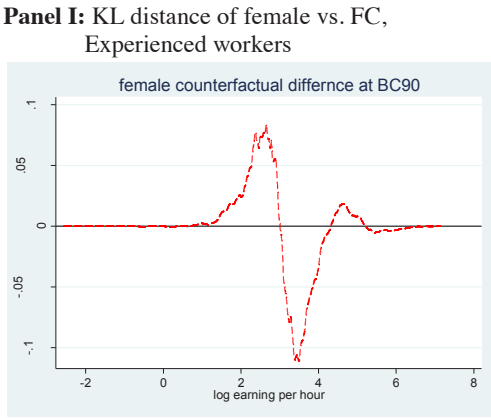
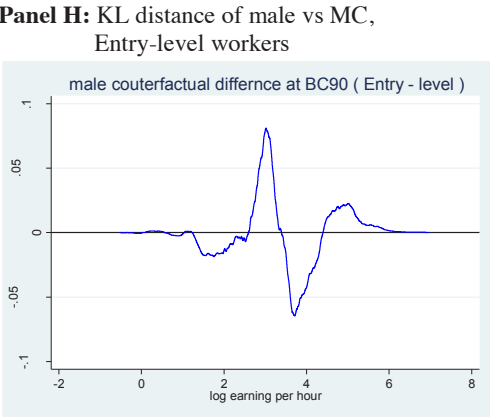
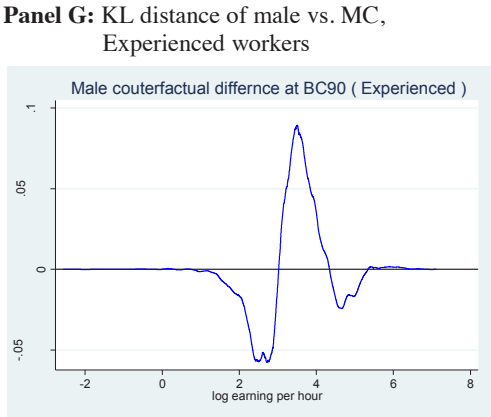


Panel E: KL distance of counterfactual, Experienced workers



Panel F: KL distance of counterfactual, Entry-level workers





These illustrations of Kernel density, as show in figure 14, give the same results as those of the parametric decomposition, BO, and show clearer pictures of the gender earning gap. The counterfactual densities of the experienced are illustrated and measure the different between densities as KL distance as show in table 3 column (5) which show small gap between genders densities over time. We observe that there is no explained gap or identical density after crisis in experienced workers as show in table 3.4-1 column (2). Which means after crisis earning of male and female are not different if we focus only on their observable characteristics. Then we take into account of only unexplained gap (the different between each gender earning density and their counterfactual as shown in table 13 column (3) and (4)) which imply to the gender discrimination. And found that the counterfactual male in the experienced group have smaller gap over time which means the unobservable attributes are simultaneously lower. Normally, the male counterfactual densities will shift to the left hand side of their earning densities after they get the pooled price that mean males get higher earning than females or they will get lower earning than they get at that time if they accept the pooled price. For females, we can observe the opposite trend to those of males as shown in the figure 14 panel A which shows the counterfactual earning distribution stand on the right hand side of the earning density in every period which means females get lower earning than males.

**Table 3:** KL-distance test of earning density

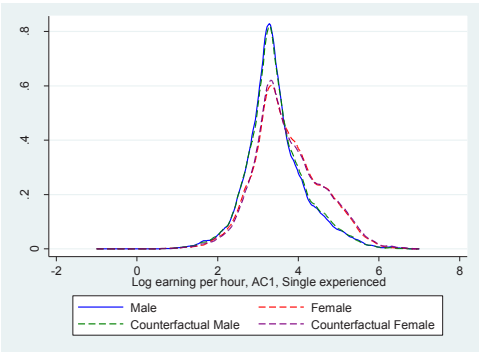
Condition  (1)	Explained gap (Counterfactual gap)  (2)	Unexplained gap		Earning density gap (5)
		Male and counterfactual male  (3)	Female and counterfactual female  (4)	
<i>All fulltime workers</i>				
BC (1985-1990)	28.4480	21.2473	39.8654	179.8362
BC (1991-1996)	16.1728	19.8256	33.8115	133.8325
DC (1997-2000)	6.3850	12.8272	21.8089	81.1099
AC (2001-2006)	0.1482*	3.3807*	5.1630	17.8554
AC (2007-2012)	1.6419*	2.5946*	3.9503	11.7586
<i>Experienced workers</i>				
BC (1985-1990)	45.5331	25.0937	56.0254	221.3068
BC (1991-1996)	26.5123	25.4990	49.9437	180.1176
DC (1997-2000)	15.4347	17.8865	33.9428	122.5199
AC (2001-2006)	2.3577*	5.3331	8.8527	33.7761
AC (2007-2012)	0.2333*	3.7250	5.8127	18.9939
<i>Entry-level workers</i>				
BC (1985-1990)	4.21406	26.87777	22.16897	98.41687
BC (1991-1996)	15.1171	28.5456	24.7863	109.0620
DC (1997-2000)	45.7789	13.6115	11.1986	75.7481
AC (2001-2006)	81.9603	12.3300	8.1340	106.9804
AC (2007-2012)	80.3743	5.8738*	3.9483	124.0044

Remark: \* means both densities are identical density.

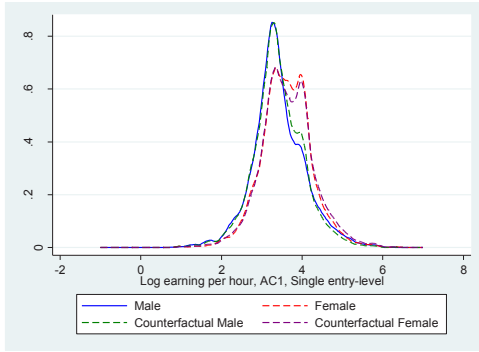
For the entry-level labors, females earn more than males after BC80 and their middle range of counterfactual density are shifted a little bit to the left hand side of female earning distribution which means females can earn more than males in some levels of earning as shown in figure 13 panel B and KL distance of earning densities between gender tend to be greater over time as show in table 3 column (5). KL distance of explained gap are greater over time as shows in table 3 column (2) which come from the observable characteristics of male and female are different and tend to be that female get better characteristics than male. The KL distance of the unexplained gap, the different between counterfactual densities and their earning densities, are lower over time as show in table 3 column (3) and (4).

**Figure 15:** Example of Earning density and their counterfactual of experience vs. entry-level labors by marital status, AC1.

**Panel A:** Earning and counterfactual density  
Single experienced workers

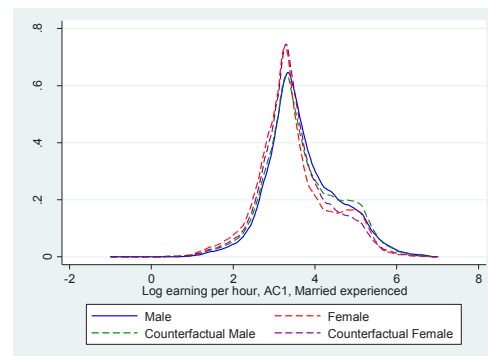


**Panel B:** Earning and counterfactual density,  
Single entry-level workers

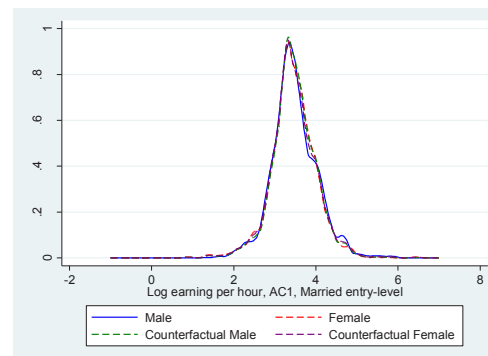




**Panel C:** Earning and counterfactual density  
Married experienced workers



**Panel D:** Earning and counterfactual density,  
Married entry-level workers



**Table 4:** KL-distance test of earning density for single group

Condition  (1)	Explained gap (Counterfactual gap)  (2)	Unexplained gap		Earning density gap  (5)
		Male and counterfactual male  (3)	Female and counterfactual female  (4)	
<i>Single experienced workers</i>				
BC (1985-1990)	2.1574*	32.9342	35.1924	142.2337
BC (1991-1996)	33.4379	24.8097	29.2457	158.1195
DC (1997-2000)	108.5987	13.3708	17.3855	161.9632
AC (2001-2006)	114.1106	2.3491*	2.9013*	127.2785
AC (2007-2012)	210.5517	3.9868	3.4915*	259.4423
<i>Single entry-level workers</i>				
BC (1985-1990)	6.9237	31.1389	27.5238	122.1070
BC (1991-1996)	22.0916	31.3600	30.7421	135.2610
DC (1997-2000)	78.5461	14.8717	16.0145	102.0811
AC (2001-2006)	171.4328	14.0292	11.9172	193.5465
AC (2007-2012)	235.8074	10.9791	9.9554	334.2056
<i>Married experienced workers</i>				
BC (1985-1990)	100.5837	26.1740	96.6569	299.0916
BC (1991-1996)	82.5853	30.8171	83.3299	273.0789
DC (1997-2000)	75.6547	23.6123	58.9437	205.1126
AC (2001-2006)	45.7196*	13.7983	27.1521	113.8184
AC (2007-2012)	1.2644*	0.6358*	1.0824*	4.4455
<i>Married entry-level workers</i>				
BC (1985-1990)	10.84989	1.6295*	0.8142*	15.31799
BC (1991-1996)	11.3727	4.2129	1.9481	18.9676
DC (1997-2000)	4.8747	3.7083*	1.1167*	8.0289
AC (2001-2006)	0.5875*	2.9712*	0.9831*	5.5963
AC (2007-2012)	0.0832*	1.3159*	0.4380*	2.9499*

Remark: \* means both densities are identical density

After we found that earning of females in entry-level are not different from males as the gender discrimination but we can observe that experience females face something like the gender discrimination. Then we recheck earning densities under the condition of marital

status which show us some factor behind this observation. On this study, we take in to account for four groups of the results. The first one is the group of single experienced male and single entry-level male, under our assumption that single male do not change their behavior until they got married as in the US, Knowles (2012) show that married men have more weekly hours work than single men. The second group is single experienced male and married experienced male. Then we focus on single experienced female and married experienced female. And the last one, we focus on the single entry-level female and married entry-level female, under our assumption that most of married female in the entry-level labors do not have children or not take care of their family.

By using DFL and KL-distance again we can get the results as figures 15. We can observe that both single experienced labors and single entry-level labors have gender gap in term of female earn more than male as show in panel A and B. And KL distance show greater gap over time as in table 4 column (5) and (2) which come from the observable characteristics. We consider to married experienced labors and found that KL-distance of this group is highest but tend to lower over time (table 3.4-2 column (5)). We take in to account with the unexplained gap which we found that the married entry-level workers is the group that has lowest gender discrimination. These results confirm that Thai labor market is not facing with gender discrimination especially in entry-level. The main factor of the gender discrimination should come from the other factor as market interruption after the women got married for a while in the experience labor. Which imply that the married experience labors have more opportunity to have children and have to take care of them then they could not make productivity as the enterprise' expectations. But the trend of gender earning gap is lower over time.

Then we can conclude that on average, we found the gender earning inequality but this gap is lower over time which corresponds to the previous study (Nakavachara, 2010). In addition, we found that there is no gender discrimination in the entry-level labors. Our results agree with the study by Bertrand, Goldin and Katz (2010) who state that males' and females' earning are nearly identical when they just graduated or enter to the market and then the gender gap is rising from the differences in training, career interruption and the weekly hours work, using the data of MBAs from a top US business school. Moreover, our study shows that the female entry-level labors can earn more than male and there are not much different between gender both married and single in this group. And the earning of married females tends to different from married male and even with single females in the experienced group. Which confirm that women change their behavior after they married and may come from childbearing because the earning gap of married entry-level labors are not different. And the married entry-level labors have low opportunity to have children. The average age of this group is around 21 years while the average age of first time pregnancy from the Thai reproductive health survey 2009 report is 23.3 years (NSO, 2010). Then the main factor that pushes women to change their working behavior comes from the fertility and the fact that they have to take care of their children after that. The employers can be concerned about female productivity and then will offer the lower wage for married experienced women than men. Becker (1992) stated that the married women can make the household productivity which could not be evaluated for a normal market but it does not mean they don't have the productivity. Therefore, if some parts of household work can be substituted by someone or some other organizations, these women can go to work as well as men. Even women have to find the lower paying job instead when they have children as the study of Fernández-Kranz and Lacuesta (2013). These reasons make a gender earning gap which may not come directly from the gender discrimination.

From BO and DFL results, we can see that the gender gap tend to be lower over time and females could not take advantage of males even they have better characteristics. From these results we can see that women are not discriminated by gender but the major factors of gender earning gap are come from the marital status and the market interruption as fertility. This result imply as Angrist and Evans (1988) who found that women have to disappear for child-bearing about 13 years. Our results show in the married group with experienced labors which have high probability to have children in their families. Then women in this group have to allocate the time to take care of their family members more than the women in the other groups. This may be the main reasons behind the earning gender gap in Thai labor market. Following these techniques, we can see that the Thai's labor market does not have the gender discrimination, especially in the entry-level group. However the Thai's labor market has the gender gap among the experienced labors especially in the married group. These results make us to concern about the fertility decision. If we have just considered only the results, it would make the reader confused and think that the unmarried status provide a better career opportunity which will then make them want to stay single. But our results can be brought to the policy makers to develop the policies that support the women workers to work even they are married and have to hold their family work.

#### 4. Conclusion

This paper studies gender earning gap in Thailand, between 1985 and 2012 for twenty eight years by using mainly the data from Thailand's Labor Force Survey (LFS) during 1985-2012 collected by the National Statistical Office (NSO). We separate the data based on the 1997 financial crisis. These groups belongs to the period before crisis, in 1985-1990 (BC80) and 1991-1996 (BC90), one group during crisis, 1997-2000 (DC) and two groups after crisis, 2001-2006 (AC1) and 2007-2012 (AC2). These data around 40% of Thai labor market. The unemployment rate of women is lower than men after crisis. We found that labors are working in services sector greater over time. And this sector prefers to hire women more than men. Women can take advantage on both of education policy and restriction of human resources.

After that, we use the parametric, Blinder-Oaxaca (1973), and semi-parametric, DiNardo-Fortin-Lemieux (1996), to measure the gender earning gap. We found that the main factor of earning is come from the experience and education which we use as years of schooling. Then we separate the data into two groups by using the potential experience, entry-level workers who have not more than 5 years of experience, and experienced workers who have more than 5 years of experience. We found that there are very low gender earning gap in entry-level workers which come from the main factor on education. In the entry-level workers, women have higher years of schooling than men. This characteristic makes them have high probability to get higher earning than men. But from the results of BO we could not conclude that women can take advantage from men absolutely. When experienced workers show that there are gender earning gap but it is lower over time. These results are correlated to DFL results but we can see the entire distribution and observe the trend of movement.

Then we explore on the different of entry-level workers and experience workers and found that one of the main different factors is the marital status. We separate the data into two groups on each type of potential experience then we have four observable groups. We found that women in both the single experienced workers and single entry-level workers can take advantage on men finally. That means we are facing with the gender earning gap in the opposite way of the gender gap definition. But we still have gender earning gap within the

married workers and tend to be lower over time. These results lead us to explore the reasons behind the gender earning gap in Thailand. One thing that may happen with married women workers and make them different from men and single women workers is childbearing. This reason makes market expect that motherhood could not allocate their time for working as much as the single.

Then we can conclude that Thai labor market have less gender earning gap in term of normal definition. We could not found the gender earning gap in entry-level workers and single workers. We found the gender earning gap in married workers especially in the workers with children. Then we should to solve the gender earning gap on the right position.

#### 5. Discussion

This paper studies gender earning gap in Thailand, between 1985 and 2012 for twenty eight years. In the past, there are many factors to generate the gender discrimination in Thailand due to the way of living and opportunity to enter to the job market for women. This study, we found that women get higher education than men over time particularly in the entry-level group. Women in this group also earn more than men. Even in the experienced group we found that single women earn more than men and the earning of single women catch up the married men who can have highest earning. From these results we can observe that there is not gender discrimination in the Thai labor market especially in entry-level group. This equality may come from the education policies and the development of country which makes the labor market demand for educated labor and give advantage to women to get higher paid.

Women have been interrupted from the market by various family reasons such as to give birth and to take care of their families. These reasons are disadvantages for them to receive a chance for a continuous training or obtain experience at work continuously. These shortcomings can affect their long term earning and they can be under pressured with the entrepreneur's expectation for their high level of productivity. We see that single women with experienced can earn as much as men which means that there are no gender discrimination in Thai labor market. But it does not mean that women stay single or have to tradeoff their earning with their live. Because we have to sustain the human race and the nation then if women decide to work only, it will cause the big problems in the future. For example, if women have to focus on work more than to take care of their children or think of family, we will get the troubled children and it will cause aging society due to lower birth rate and not enough new high quality generation to develop the country. For future study we should study about suitable jobs for women which make lowest job depreciation when they have to face with market interruption.

We refine the results with the parametric and semi-parametric approaches by using the Blinder-Oaxaca (1973) and DiNardo-Fortin-Lemieux (1996) respectively. The results from semi-parametric (DiNardo-Fortin-Lemieux, 1996) correspond with the parametric (Blinder-Oaxaca, 1973) results. This paper has proved that there is no gender discrimination in the Thai labor market particularly in the entry-level labor but it does not mean that Thailand has no discrimination in the society for the other aspects. Because the observation in this study is only the people who work and get the earning in the job market which around 40% of labor force in Thai labor market. From all results we found that women can take advantage from the country development because when country is developing they need a great number of labors. That only the men labors could not supply sufficiently. Then women are the source of labor supply to the market. In near future, people will try to have more years

of schooling for making higher wages. The low skilled labors will have a harder time to find the job in the market because nowadays we have a large amount of the foreign labors moving in from our neighboring countries. But eventually, these countries will develop and they will need all skilled labors which will make these foreign labors return to their countries which will decrease the number of these types of labors in the future. The shortage of the labors will force the employers to change their labors base to technologies base productions ultimately. The Thai education policies should support the suitable education for labor market.

Finally, government should launch the policies to support the women workers for taking care of their children in work place or help them find the reliable and payable nurseries for their children or senior people easier. These policies make us have the high quality of social living and will help to reduce the probability to become the aging society in the near future. And we can increase the labor supply to the market or the enterprise can hold their potential employee with them even they have to take care of their children.

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## THE IMPACT OF VISUAL MERCHANDISING MANAGEMENT ON CUSTOMER ATTRACTION IN RETAIL STORES

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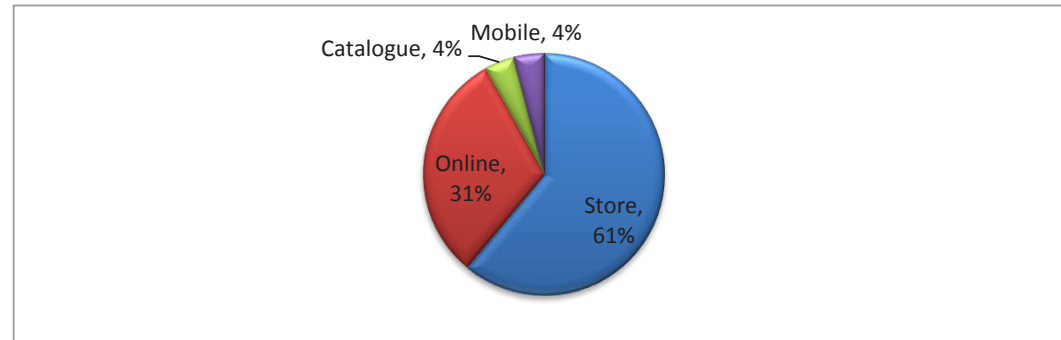
## Abstract

Shelf visual merchandising techniques can maximize product attractiveness, create good store atmosphere, and attract more customers accordingly. These techniques allow brand managers to differentiate their offerings from other competitors. This study aims to investigate the effective visual merchandising techniques that influence customer awareness during a buying decision making process at the point of purchase. Using an experiment method together with customer interviews, the findings indicate that the interplay among appropriate position of shelf facing, in-store promotion, and shelf decoration strongly attracts customer attention when entering a store and influences customer evaluation of brands displayed on shelf. For example, left side of both eye- and touch-level shelf positions gain more attention than other level shelf positions because Thai people usually read or write from left to right. The results also reveal how different brand characteristics affect shelf setting and highlight the impact of promotional sign on customer attention and buying decision. In summary, this research study provides insights into how retailers or brand managers could deploy shelf visual merchandising techniques to increase customer attention and purchasing evaluation at the point of purchase. The results could be used as a part of strategic marketing planning in retailing businesses.

**Keywords:** Visual merchandising, Store display, Customer buying decision, Brands, Marketing

## 1. Introduction

There are many channels for consumers and shoppers to make a purchase such as in store, online Internet, mobile shopping and catalogue shopping that caused the increasing in business competition. As the A.T. Kearney Future of Stores studied that shopping in store still be the most popular channel for customers (A.T. Kearney Future of stores, 2010). In Figure 1, 61% of customers spent a large proportion of time shopping in store, it is followed by 31% of customers spent time through online shopping. Thus, in stores shopping remain the best opportunity for a business to inspire customers to spend more money and times.



Retail stores become the important platform for every business including in fashion, home furnishing, automobile section, technology, food and beverage business and FMCG industry. Many businesses confront with the problem of how to arrange their product to gain the most customer awareness and what is the best system to gain better use in the point of purchase (Kim, 2013, POP).

There are characteristics of the retail store purchasing behavior, which are the important factors that should be determined in the purchasing behavior. Firstly most of the customers' decision making occur in the store. Customers generally process product information in the bottom-up than top-down in the nature (Hoch & Deighton, 1989). Another research investigated the behavior of customer in the supermarket, the study have found that only 25% of purchasing are planned before customers come in the store (Dagnoli, 1987). Secondly, some research showed low involvement of customers in store in making a purchase. Customers may make their purchasing choice very quickly after searching for information and after price comparing (Hoyer, 1984). Lastly the survey expressed that most customers go to shopping in store every week. The average number of shopping times is approximately 2.2 times a week (Coca-Cola Research Council, 1994).

Visual merchandising normally is defined as everything that customer can touch, see, both exterior and interior representing overall store environment including in shelf display, merchandise presentation, in store design, window display, mannequins, props, store lighting and graphics and signals (Cahan & Robinson, 1984; Diamond & Diamond, 2003). These visual merchandising tools help customers to easily approach product without the help of a sales person. Because of the mood of customers can stimulate their purchasing decision in the positive way. Moreover having good virtual merchandising can create positive image of business and can potentially result in attention, interest, desire and action on the part of the customers (Baker et al., 2002). Visual merchandising is the way to differentiate oneself in businesses from other competitors in the case that competitor's product is quite similar in the market. It is crucial to make difference in customer eyes as superior store presentation would match with customer's expectation. It gives the business an opportunity to compete with other competitors.

There are many factors that should be considered to design effective visual merchandising in the retail store (Bailey & Baker, 2014). High level design includes ceiling, walls, lighting, architecture, graphics and display product. Eye level designs includes product positioning, props, point of sales, countertop installation and graphics. Ground level design consists of fixtures, seating, layouts, densities, product positioning, flooring and lighting. Windows includes fascia, storefront and entrance.

Wrong shelf arrangement between low price and higher price product could lead to low expected sales. By changing the layout of shelf display and adding some trail product, the revenue might potentially significantly increase and the defect product may be decreased. In other words, changing product positions may help company in the positive way and have highly involved with customer awareness.

It is an essential to investigate how the shelf visual merchandising affects customer attention in retail stores. By understanding the most effective the shelf display position would help to the company to display their products properly and efficiently.

The objective of this paper is to identify the most important visual merchandising method that would influence customer awareness in purchasing process. Managing visual merchandising can help to maximize product attractiveness and to impulse customer attention. Moreover, it also helps customers in selecting their desirable products more effectively and efficiently. Eventually, the company could arrange effective display system, which would help to compete with other companies.

## 2. Literature Review

### 2.1 Visual Merchandising

Effective visual merchandising plays an important role for every retail business in order to attract customers or shoppers and to increase brand awareness. It could help shoppers to make purchase immediately by using innovative display design, attractive sign board, and advertisement. Shelf arrangement or other factors could draw customer's attention to do impulse unplanned buying. Many researchers investigated that selling the product may not be the only important issue but product should related with customer satisfaction. In addition, facilitation for customers is also important in customer purchasing decision (Quartier, Vanrie, & Van Cleempoel, 2009).

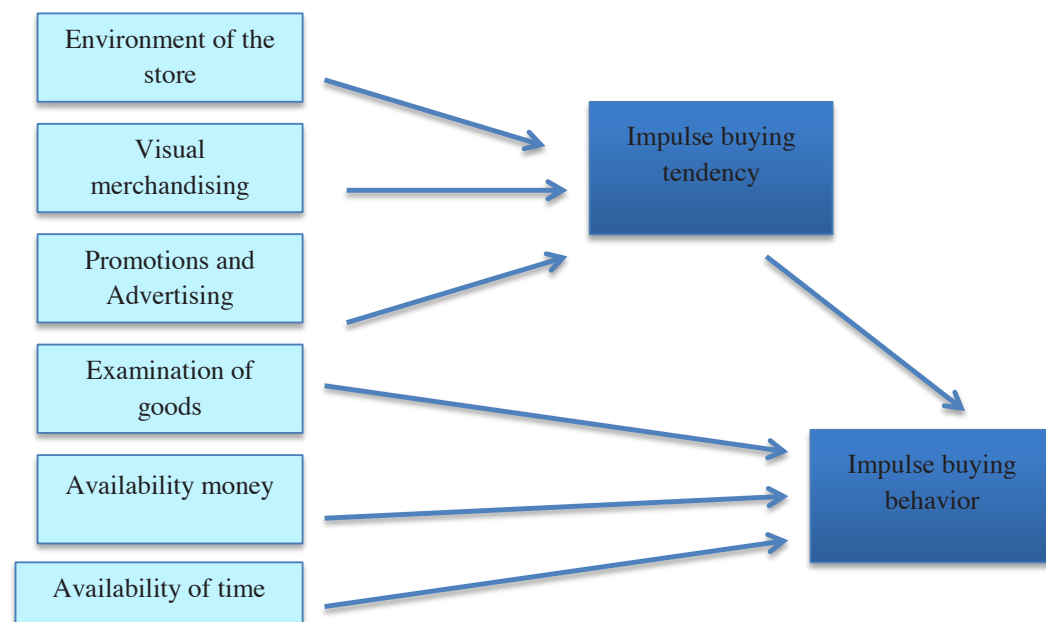
Visual merchandising included exterior displays involving window display, and façade, which create good first customer impression when they enter to the store. (Darden, Erdem, & Darden, 1983). Another component is the store interior including signage, layout, fixturing, props, other presentation methods and ambient condition (Davies & Ward, 2002). With reference to Kotler's (1973), visual merchandising can be defined as atmospherics which could be used as an important marketing tool to increase customer awareness and attract their attention in store. Research in visual merchandising paid attention in studying various aspects of customer response to visual merchandising such as cognitive and sensory effects (Fiore, Yah, & Yoh, 2000). For example, when customers have a stress mood, they will no longer in store. Thus, visual merchandising is an effective way to learn and understand customer purchasing behavior.

## 2.2 Impulse Buying Behavior

Impulse buying behavior refers to purchasing of a certain product without thinking or spending less time in making decision. It occurs when customers get surrounded in the store by some extra sort of excitement and newest (Underhill, 1999). Unplanned purchase is one of the most important knowledge for understand purchasing behavior and customer's perception (Park and Kim, 2008). Positive feeling in the customer's mind will lead an impulse buying satisfies for social interaction, entertainment, excitement and higher status to the customers.

Figure 2 represents the model of impulse buying with a store environmental stimulation and situational aspects of customer consumption. Environmental stimulation accelerates customer buying process by store visual merchandising, promotion, marketing stimuli conducted by marketers. Moreover, the two factors of situation factor, which are money and time available on impulse buying, should be considered.

**Figure 2:** Factors that stimulate an impulse buying process (source: Afr.J. Business)



There are three characteristics of impulse buying, which are different from other purchase behavior including being unintended or unwanted, being unreflective, and spontaneous or sudden (Jones et al., 2003). Unintended or unwanted purchasing refers to when the customers do not plan to look or buy product but finally customers make purchase without planned before. Unreflective purchase refers to when customers are lacking of evaluating product in thinking about long term result. Spontaneous or sudden purchase refers to customers were making purchase with a very short time or in the other word customers buy the product immediately after seeing it (Dawson & Kim, 2009).

In impulse buying process, customers are being affected by internal and external environment factors (Dawson & Kim, 2009). The internal factors contain of features as light, decoration, integrated sales technique and other marketing activities (Levy and Weitz, 2007). The external factors refer to marketing stimuli, which set by marketers such as in store promotion, discount price in order to attract customer attention (Youn & Faber, 2000).When

customers are persuaded by promotional incentives, they will have high motivation for buying and try to make decision faster which resulting in unplanned purchase of goods or services. External factors effectively can increase customer attention and increase purchasing volume than what customer firstly planned to purchase.

## 2.3 Visual Merchandising in Relation to Impulse Buying Behavior

In-store shopping has relevant effect in both internal and external factors. In impulse buying process, there is a strong relation between factors from visual merchandising and consumers' impulse buying behavior. Some research investigated that customers who are looking for shopping in the store make more an unplanned purchase, when customers stay in the store longer than usual because customers will tend to encounter more surrounding stimuli in the store such as in store promotion, nice decoration resulting in increasing purchasing (Jarboe & McDaniel, 1987). This supports Stern's (1962) conceptualization of impulse buying as response to the consumer's respond to in-store stimuli. Shoppers may actually use a form of in-store planning to finalize their intentions (Rook, 1987). When customers faced some store stimuli such as in store visual merchandising and in store promotion, they would have more possibility to make more purchase and increase their awareness toward the product (Han et al., 1991).

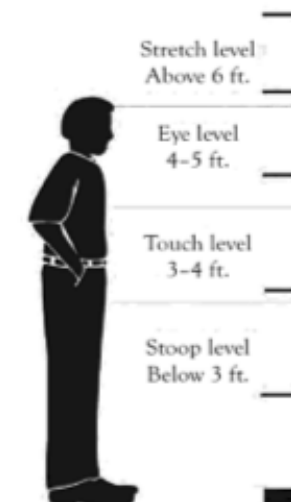
## 2.4 Shelf Space Management

The shelf display is referred to the location and space where customers meet the products. Actually the shelf display in the retail business is like a silent salesman (McKinsey, 2011). Therefore, managing shelf space is important for every retailers to draw a customer attention and to maximize profits for the company. There are the problems in allocating product to the shelf space as shelf space is a scarce and fixed with retail store condition. The number of product is continually increased, hence, the problem of how to allocate the entire products to the shelf should be deeply considered. Thus, customer's purchasing process may be influenced by in-store factors including shelf space position and in shelf related factors. Well-organized shelf display management can increase company performance, attract more customers and also prevent the defect stock control. Terblanche (1999) stated that the factors that influence shelf attractiveness in customer purchasing behavior are:

### 2.4.1 Shelf Position with Eye Level Zone

Shelf position normally comprises of different vertical shelf levels including stretch level, eye level, touch level, and stoop level shown in Figure 3.

**Figure 3:** The vertical shelf levels (Stretch level, Eye level, Touch level, Stoop level)





- Stretch level (>6 ft.) is a less valuable shelf zone, which can gain less customer attention. The product placed in this position should be a lightweight product because it can prevent product from possible damaged.

- Eye level (4-5ft.) is located in the eye level zone, which is the key position for the product that is desired to be emphasized or to be promoted to get the best attention.

- Touch level (3-4ft.) this shelf level is located approximately at the customer waist height. Product that is placed in this area will receive more attention than product in stretch level and stoop level but it has less important than eye level. The product that should be placed is high profit product or high price product.

- Stoop level (<3ft.) this shelf level is not that attractive for customer while walking in the store. The product in this level are low margin merchandising or heavy product. Heavy product is placed in this level to avoid the damage. It is easy for customer to select the product.

The difference in the shelf zone does not affect only customer's perception toward the product but some researchers also studied that products in customer's mind differently depend on the place which they are located in. The products that are located in eye level and touch level generally get more customer awareness and attention.

The shelf position also has an impact on the sales of the retail store products. As the natural tendency of customers who are focusing on the product which are located at the eye level (Abratt & Goodey, 1990). The research investigated that the shelf vertical position had higher attraction when compared with the horizontal position. (Dreze, Hoch, & Purk, 1994).

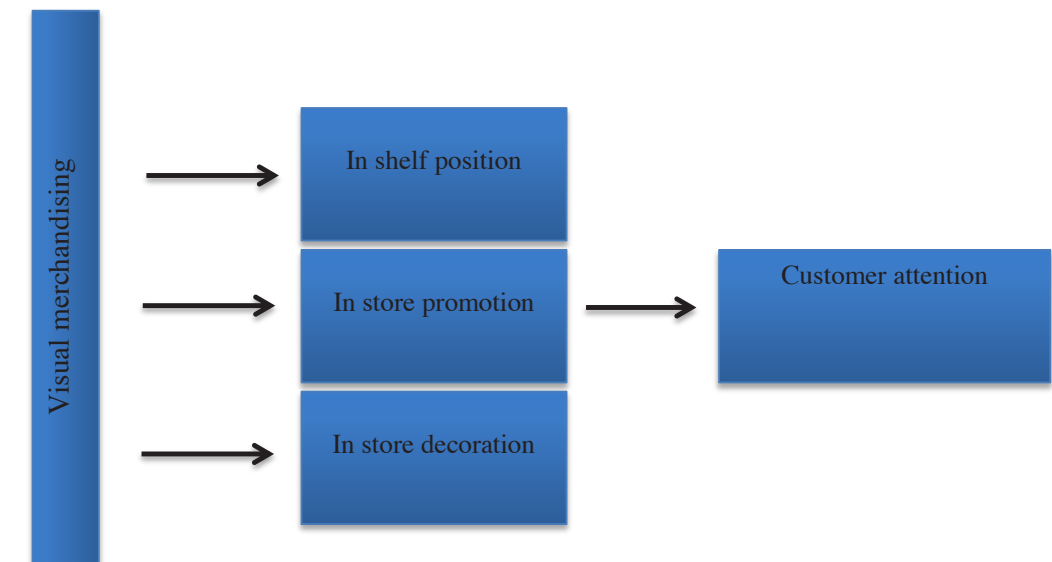
Some research also stated that several packages of the same product which was displayed on the shelf. Customers had more possibility to choose the product at the middle (Christenfeld, 1995). The central position can draw customer attention comparing with other position on the shelf (Shaw et al., 2000).

Customers believed that the shopping place where was quite expensive can show the high quality and higher perception for the customers. In addition, these shopping places mostly will place an expensive or high quality product on the top of the shelf and placed the cheaper on the bottom shelf (Raghubir and Valenzuela, 2008). Moreover, some researchers studied that customers when making a purchase of wine product among unfamiliar brands, they will intentionally choose the product that is located at the top or in the middle of the vertical shelf.

## 2.5 Framework

From literature review, the research framework is developed to indicate factors that stimulate customer to get more attention in the store. Figure 4 showed the framework on visual merchandising on customer attention in the store. There are three factors, which have an effect on customer attention. These three factors are in shelf position, in shelf promotion and in shelf decoration.

**Figure 4:** Framework of impact of visual merchandising management to customer attraction in retail stores



## 3. Research Methodology

This study was conducted with the form of experimental method, which allow to understand the real behavior of the customers. This study has been divided into two research phases:

### 3.1 Phases One: Experimental Method with Observation Process

This phase focused an experiment and exploratory of the customer behavior. The selected product was from one stationary business named ABC brand. The product of this company included mobile phone case, pencil pouch, notebook, sticker, pen, wallet and key chain distributed to sell at many department stores such as; Be trend (Siam Paragon department store), B2S, Loft and Be trend (Emporium).

An observation research is performed in the ABC shelf display at one department store in Bangkok Thailand for four hours from 16:00-20:00 in the weekday of August 2014 which is a high traffic time in order to observe customer behavior and to understand the impact of visual merchandising element that is adopted to test.

#### 3.1.1 Key Object

One item product was selected as the key object to test the customer attention. The selected product is the medium sales product with high price (Aurore Kitchen second bag) shown in Figure 5. The reason to choose this product is because this product has high price and the size of product is medium. The product is not the newest with higher interest from the customers.

Figure 5: Key Object Product (Aurore kitchen second bag)



3.1.2 Observed Variables in Observation Process

In this experiment, the key object product was placed in different location as described in 3.1.3.1. In 3.1.3.2, the key object product was placed with different in store signal and promotion. In 3.1.3.3, the key object product with placed with different shelf decoration. The key object product was placed for half an hours to see the number of customer visiting shelf and number of time that customer touch or hold the product to take a look. We observed the following variables of the customers:

- Number of visited customers,
- Average time spending in the shelf,
- Number of customers who hold the key product,
- Number of customers who buy the key product.

3.1.3 Experimental Design

Data on the observed variable were collected when the key object product was placed in different location described in (1), with different in store signal and promotion described in (2), with different shelf decoration described in (3).

(1) In Shelf Product Position (Eye-Level Zone)

In this experiment, the key object product was placed in six different location including the eye level, the touch level, and the stoop level as the following preposition (P) in Figure 6. Moreover, additional factor was included to impulse customer attention in (2).

Figure 6: The positions of the key product in the shelf during the observation

Left P1-1	Right P1-2	Eye Level
Left P1-3	Right P1-4	
Left P1-5	Right P1-6	Stoop Level

P1: In shelf product position are positively related to customer attention

- P1-1, Placing the key product in the eye level shelf in the left side position.
- P1-2, Placing the key product in the eye level shelf in the right side position.
- P1-3, Placing the key product in the touch level shelf in the left side position.
- P1-4, Placing the key product in the touch level shelf in the right side.
- P1-5, Placing the key product in the stoop level shelf in the left side position.
- P1-6, Placing the key object in the stoop level shelf in the right side position.

(2) In Store Signal and Promotion

The key object product was placed in different in store signal and promotion.

P2: In store signal and promotion are positively related with customer attention.

P2-1, Placing the key product in the top-left side of the shelf and using in store promotion sign “SALE”.



P2-2, Placing the key produc in the top-left side of the shelf and using in store promotion sign “NEW”.



P2-3, Placing the key product in the top-left side of the shelf and using in store promotion sign “HOT”.



(3) Shelf Decoration

The key object product was placed in different shelf decoration. We placed the key product in the top - left side of the shelf and using additional shelf decoration by adding colorful wallpaper, product sampling and cartoon character on the shelf and investigate how customer are attracted by the decoration shown in Figure 7.

P3: Shelf decoration (Colorful wallpaper, placing cartoon characters) is positively related with customer attention

Figure 7: The ABC shelf in Korea in Thema park event



3.2 Phases Two: Qualitative Method

This qualitative method is used because it is a suitable method for research that studied customer attention behavior in the store (Eisenhardt & Graebner, 2007). The qualitative analysis is chosen because an open-ended questions helps to gain deep information which hard to gain from other tool of primary research. Data were collected by interviewing to formulate the meaningful insight of the customer mind. This qualitative insight was needed to investigate or to gain the best proposition, which can be empirically hypothesized. The result data come from the interview with target customers and come from the observation in the real store.

3.2.1 Interviewee’s Profile

Data were collected by interviewees include ABC customers of 6 women and 4 men. They were both frequent and occasional purchase customers of the ABC brand which the age 20-35 with a medium to high income (18,000 baht to above) due to the price of the brand is quite high compared with other brands.

3.2.2 Interview Process & Instrument

In depth interview was conducted in the department store (Be trend, Siam Paragon department store). The instrument would be administered to the customers who walking around Be trend. Customers was asked to cooperate in the interviews by providing deep detail response to the questions. The question areas were prepared in non-leading question formats to ensure validity and honesty of responses. The interviews had a time limit of an average of 20 minutes in order to avoid some interview went over of the time limit and no enough time to give information additionally. The interview questions were developed from Diamond and Diamond (2007), Law, Wong, and Yip (2010), Youn and Faber (2000), Rook and Fisher (1995), Gopal (2006), Bhalla and Anurag (2010), Vezotolu (2011), and Hubrechts and Kokturk (2012).

The interview question were developed from the three primary factors which influence customer buying process in a shelf. The first factor measured in-shelf product position. The second factor measured in-store signal and promotion attractiveness. The last factor measured shelf decoration such as cartoon characters, colorful wallpaper, Sample showing. In addition, the observations from the real place, which could be directly, investigate customer’s attention on the sample situation.

4. Data Analysis

The results from the experiment and interview on the impact of visual merchandising management on customer attraction in retail are presented in this section. Findings from the experiment and the interview revealed the involvement on customer’s intention, response to the use of visual merchandising in the in shelf arrangement. Finding reveals the perception towards in store visual merchandising in customer’s mind.

4.1 Phase 1: Experimental Method

4.1.1 In Shelf Product Position (Eye-Level Zone)

Results showed that P1-1 (the eye level shelf, in the left side) is the best shelf position because it could attract customers to visit the shelf and importantly both position got the highest number of customer who touching the key product and buy a key product. Table 1 displayed the observed variable of customers with different shelf product position.

Importantly the finding is consistent with the previous research that people normally see the thing from left side to right side and upper to lower level. Therefore, the top-left side position has been seen first and gain attention the most. (Dreze, Hoch, & Purk, 1994).

The research finding was consistent with the previous study of Abratt & Goodey (1990) that shelf position had an impact on products of the retail store, and customers naturally focused on products located at the eye level.

Table 1: Summary of Observed Variables with Different Shelf Positions

	P1-1	P1-2
Number of visited	16	14
Customer touch product	7	5
Customer purchase product	1	0
Estimated time spending	1.24	1.06
	P1-3	P1-4
Number of visited	22	8
Customer touch product	3	2
Customer purchase product	0	1
Estimated time spending	2	3.2
	P1-5	P1-6
Number of visited	16	19
Customer touch product	0	1
Customer purchase product	0	0
Estimated time spending	1.07	1.8

We concluded that  
*P1: In shelf product position are positively related to customer attention*

4.1.2 In Store Signal and Promotion

Results of observed variable when placing the key object product in different in-store signal and promotion were showed in Table 2.

When placing a “Sale” sign with the product , many customer gave more interest to visit the shelf. It is interesting that more than a half of visited customer touch the sale product and see how much the product was discounted. In the experient, 30% discount was provided for this product, and the price is reasonable. Some customers spent long time to find other discount product and some customers use very short time to buy the discount one to avoid solding out.

There are some customers come to visit the shelf when placing “NEW” sign. It is interesting that customers gave middle level of interest with “NEW” sign. They just come to see other product category without an interest to purchase product with the “NEW” sign.

“HOT” sign is placed along with the product to express that the product is bestseller. Some customers visited the shelf to touch the key product and making a decision by comparing with the same product category. One family come to see the key product and talk about the “HOT” sign and uses it as a key decision to purchase it.

This findings were consistent with the study of Youn & Faber (2000) that marketing stimuli including store promotion, discount price had an effect to attract customer attention.



4.2.2 In Shelf Signage and Promotion

Finding reveals that in store promotion signs create different meanings for customers in making purchasing decision shown in Table 4.

Table 4: The conclusion of experimental method in each shelf position

New	“New” sign creates perception to customers that this product is new arrival or it is an innovative product. Some customers think that purchasing a product which has “New” sign makes them to be more fashionable shoppers.
Hot	“Hot” sign creates perception that this product is best seller or selling good when comparing with other products in the brand, which can be delighted product towards customer mind.
Sale	“Sale” sign creates perception in a positive way to customer that this product is on sale. The price is decreased from the original price. This sign is most preferred from customers.

From these three sign, “Sale” sign is most preferable because of discounted price. This sign can attract customers to visit the shelf the most because customers prefer to buy the cheaper products with the same quality. Moreover “New” sign also helps customers to decide what product is newly on shelf or it is new developed version. “Hot” sign is preferable for most of the male interviewee because they are less concerned about price but preferred product which is best seller or quite popular because they want to be accepted as trendy people.

4.2.3 Shelf Decoration

Shelf decoration is divided into three factors, colorful wallpaper, cartoon character and product sampling. These three factors can gain customer attention when they enter to the store but cartoon character is most preferred from customers. The decoration depends on the product or brand, for example, product which expresses as the cartoon brand should decorate by cartoon character. However, for mobile product, customers would like to try it, therefore the decoration should be product sampling. For ABC shelf, there are some concerned in making the shelf to be more attractive. Firstly, the shelf should be well arranged with the same categories product that will make customers easily to find products. In addition, cleanliness dramatically affects customer perception. Some interviewees recommended ABC shelf to use most of brand cartoon characters as the main decoration in the shelf to attract customers and make customers to remember the brand toward these cartoon characters.

The research findings of visual merchandising are important for retail business because of the followings. In store promotion is the most important variable in in-store environment. It can significantly influence consumer’s store making decisions. For “Sale” sign, it is suggested to specific the discount percentage. For “Hot” sign, it should be change to be “Best seller” to make it more attraction or to make positive perception toward the key product than using “Hot”. Moreover, design layout, cleanliness and lighting are also concerned. Defected product on the shelf, dirty stand and dust will make negative perception towards customers. Brand staffs should check and have area cleaned all the time. Trial products can solve the problem of defected product causing by customers. Brand should provide sampling for all items.

5. Conclusion

After collecting the data from experimental and customer interviews, the results showed that there are correlative relationships between in shelf visual merchandising and customer attention for the brand. The major finding indicated that in store visual merchandising effected customer attraction when entering to the store especially with suitable shelf position, in store promotion and shelf decoration. The finding implied that most of the customers tended to make a purchase with “sale” sign as customers were generally impulse by the store environmental stimulation, i.e., in store promotion and visual merchandising. The best shelf position which gained most customer attention was on the left side of the eye level shelf position and left side of the touch level shelf position because they could be seen clearly as those positions were on the eye sight position. Moreover, the left side normally be the first shot or first image in customer eye because human normally see the things from left to right as writing and reading style of Thai people was from left to right.

Results from the data analysis showed that each business has different factor to concern in setting a shelf. If the product is a cartoon stationary, the shelf should express as the funny or cartoon theme to attract customer. If business which wants to be more prestige brand image or more reliable and professional in some area, shelf has to be set in luxury or more detailed in acknowledge customer about the product benefit or history of the brand. Moreover, the changes in product position effect the trend in which customers seek for certain product with the limit time to impulse their attention. We concluded that firstly high price product or the product that company wants to promote should be place in the eye-level or touch level. Secondly promotional sign can attract customer to visit the shelf more than shelf without any promotional signal. Moreover, “sale” sign is the most attractive tool to gain customer attention. Lastly, shelf decoration is needed to impulse and to gain customer attention. The results of this research were highly beneficial to marketers or retail store managers. Managers can potentially use this visual management guideline to set up effectively marketing stimuli to attract customer attention.

This paper focused only on products display on shelf in retail stores in Thailand and those factors impacting the shelf display. This research did not examine other factors that affect customer purchasing process. In addition, this research is limited to in store decoration and in store promotion. Future research could be expanded to other internal and external factors affecting customer purchasing process.

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**THE RELATIONSHIP AMONG BRAND AWARENESS, BRAND  
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LOYALTY AND BRAND EQUITY OF CUSTOMER IN  
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# THE RELATIONSHIP AMONG BRAND AWARENESS, BRAND IMAGE, PERCEIVED QUALITY, BRAND TRUST, BRAND LOYALTY AND BRAND EQUITY OF CUSTOMER IN CHINA'S ANTIVIRUS SOFTWARE INDUSTRY

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## Abstract

**Objective** - The objective of this study is to study influence factors of brand equity and study the relationship among brand awareness, brand image, perceived quality, brand trust, brand loyalty and brand equity.

**Methodology** - A quantitative study was adopted for collecting data, a total 400 valid questionnaires was collected through an online survey website, every respondents must be the customer of antivirus software. These data was tested in a structural equation model.

**Finding** - This study found that brand awareness is positive related to brand trust, brand trust is positive related to brand equity, brand image have indirect impact on brand equity through perceived quality and brand trust, perceived quality have a indirect impact on brand loyalty through influence on brand trust, brand loyalty is positive related to brand equity.

**Practical implications** - Company owner should clear understand brand equity's implication and other influence factor, try to manage their brand properly and build a effective brand strategy in order to make some differentiation from their competitor, then get more advantage in this competing antivirus software market.

**Keywords:** Brand awareness, Brand image, Perceived quality, Brand trust, Brand loyalty, Brand equity, China antivirus software.

**Paper type:** Research paper

## 1. Introduction

In the information network era, the openness and convenience of the internet have greatly changed people's life style and working style (Yu, Li, Dong, 2013). Although the internet brings so many benefits and convenience to people, while the subsequent behavior of interfere personal information has become more serious, personal information safety has become a new problem that appear in people's eyes, people's requirement towards the computer safety has greatly increased. This causes the market demand and scale of antivirus software expanding rapidly. Some researcher pointed out that building an effective brand strategy in the antivirus software industry can enhance companies' competitiveness (Fan and Xue, 2011). Therefore, it is important for a company to manage their brand equity properly, and develop a effectiveness brand strategy.

As the internet develops rapidly, the penetration rate of the internet will be more larger, and it involves a large number of populations in China. According to China Internet Network information center (CNNIC), its "2013 Chinese internet user information safety report" indicated there are 96.5% of internet user had installed antivirus software on their computer, moreover, in the first half of 2013, 74.1% of internet user were attacked by a virus, the relative population had reached 438 million, Therefore, there is no doubt about the antivirus software is significantly important towards people.

Since internet will continuous develop, computer and internet will cover more area and population, which means market demand of antivirus software still has space to expand or cover, so there still has possibility of new entrant appear, and new competitor will be bound to occupy the market share (Fan and Xue, 2011). Therefore, companies must be prepared for the incoming compete, the effective approach to win the game is to enhance brand management and try to understand the factors that affect brand equity, try to plan a effective brand strategy and establish a great brand equity.

Research the brand equity and branding has been an important topic of research in the marketing area (Rios and Riquelme, 2008). Concerning the brand equity study, there are many former literatures had conducted researches on many industries, some scholars use the traditional approach to measuring brand equity applies to online companies (Rios and Riquelme, 2008). Their study found partial support for their model and indicated brand loyalty is directly create brand equity. They approve the brand equity model not only can applies in traditional firm, but also can use to test online companies. In addition, other researchers had tested the brand equity model in the context of higher education (Mourad, Ennew and Kortam, 2010), the result provided partial support for the their hypothesized conceptual framework, the determinants that related image of brand equity being far more significant than determinants that related awareness. Their research is similar to this study research, proposed the brand image dimension and brand awareness dimension have a relationship to brand equity, but the environment is different, the above literatures only test in higher education and online companies. In addition, some researcher built brand equity model to test in other industries such as hotel industries and clothing industries (Xu and Chan, 2009; Tong and Hawley, 2009; Kayaman and Arasli, 2007). Although many scholars conducted the model test in many industries, but author found that, there are few studies research the brand equity in China antivirus industry. Therefore, this study tries to fill the gap and hypothesize a brand equity model to test in this industry, and provide insight to brand managers for better understand the concept of brand equity, building a strong brand equity and enhance competitiveness.

## 2. Literature review

### 2.1 Brand equity

Brand equity was defined as the extra value inserted in its name, can be identified by the consumer, it also reflected that consumer is willing to pay towards a certain brand or product in a premium price compare to another brand. (Yoo and Donthu, 2002; Rios and Riquelme, 2008). Brand equity comprises of two separate dimensions: functional and symbolic. The functional dimension is related to functional characteristic and the branded product's performance, it describes how the product or service meets customers' functional needs. The symbolic dimension is associate to intangible parts of the brand, such as image associations, which is indirectly linked to the real features of the product. These intangible factors including "user imagery"(the type of person who uses the brand) and "usage imagery" (the type of situations in which the brand is used) (Delassus and Descotes, 2012; Keller, 2001).

Some scholars suggested brand equity can help marketers focus, giving them a way to explain their past marketing performance and blueprint their future marketing schedule and it also be a significant concept for brand manager to understanding and managing customer behavior (Keller, 1999; Faircloth, 2005). Similar to brand image, some researchers considered if a brand has a lower brand equity, then it may have to pay more attention in marketing and promotional activity in order to maintain its position in customer's mind, because a advertisement may cause customer's interest behavior, which means marketing activities can help build a image in consumer's mind and brand image would positively affect the overall brand equity (Arora, Raisinghani, Arora and Kothari, 2009; Juntunen, Jouni and Juga, 2010). Brand equity, whether online or offline, cannot be created without consumers recognize and recall the brand in their minds (Rios and Riquelme, 2008).

Based on the information above, that is: brand equity is directly influenced by brand image. Not only brand image was considered as the antecedents of brand equity, but also consider that brand equity can be strengthened by the creation of brand loyalty (Arora, Raisinghani, Arora and Kothari, 2009). Another factor that influencing brand equity is brand trust. Rios and Riquelme (2008), indicated consumers need to trust the seller to purchase online, websites that give consumers peace of mind will create more brand equity and patronage.

Brand equity as an important role that influencing the customers' selection process, especially in the service industry (Mourad, Ennew and Kortam, 2010). That means, sometimes brand equity can drive customers' purchase intension and even affect the brand loyalty. Besides, there is a dual relationship whereby brand equity leads to brand loyalty and also, brand loyalty leads to more strengthened brand equity, also brand equity has a positive relationship with brand loyalty (Arora, Raisinghani, Arora and Kothari, 2009). Base the above information, we assume there is a dual relationship between brand equity and brand loyalty, although it is a dual relationship, it seems brand loyalty is more appropriate to be an antecedent of brand equity. In summary brand equity has a strong relationship with brand image, brand awareness and brand loyalty, the hypothesized as follow:

H1: brand image is positive related to brand equity.

H0<sub>1</sub>: brand image is no positive related to brand equity.



H2: brand trust is positive related to brand equity.  
H0<sub>2</sub>: brand trust is not positive related to brand equity.

H3: brand loyalty is positive related to brand equity.  
H0<sub>3</sub>: brand loyalty is not positive related to brand equity.

## 2.2 Brand awareness

According to Aaker (1996), brand awareness is a significant and sometimes underestimate antecedent of brand equity. It affects customers' perceptions, attitudes and reflects the salience of the brand in the customer's mind. However, some scholars defined brand awareness as the power to link the brand to a product category (Mourad, Ennew and Kortam, 2010). In some contexts, it can drive customers to choose another brand and even change customer's loyalty (Aaker, 1996).

Yoon (2002), suggested that awareness is significantly related to web site trust, some scholars defined brand trust online as a consumer psychological state of confidence and positive expectations from a brand, and also indicated that in a virtual environment where exists potential uncertainties and risks, it is difficult for consumers to confirm product quality. Therefore, trust towards a website brand undoubtedly is a key to virtual transactions (Lin and Lee, 2012). In addition, Delgado-Ballester and Munuera-Aleman (2001) indicated brand trust as a feeling of security that the brand will meet consumers' expectations; trust is one of the most important variables in developing long term customer relationships, such as brand loyalty. Moreover, some researchers realizing the importance of brand trust in internet companies' marketing strategies, given the inherent uncertainty and decreasing product differentiation in the internet business environment (Ha, 2004).

On the other hand, Loyalty underlies the ongoing process of continuing and maintaining a valued and important relationship that has been created by trust (Chaudhuri and Holbrook, 2001). Some scholars suggested that brand trust will contribute to both purchase loyalty and attitudinal loyalty. Trusted brands should be purchased more frequently and should cause a higher degree of attitudinal commitment (Chaudhuri and Holbrook, 2001). However, in this large and growing literature, the role that brand trust play in the creation of brand loyalty as a determinant of brand equity outcomes has not been explicitly considered (Chaudhuri and Holbrook, 2001). In addition, Chiou and Droge (2006); Floh and Treiblmaier (2006) also found that, trust had a direct effect and significant influence on brand loyalty, and trust is positively related to brand loyalty (Rios and Riquelme, 2008).

Moreover, Brand awareness is also widely acceptable that have a positive effect on brand equity. According to Yoo and Donthu, (2002) they suggested brand awareness had an equivalent, positive effect on brand equity (Yoo and Donthu, 2002). But combined Mourad et al (2010)'s research, brand awareness is the antecedent of brand trust, and brand trust is directly affect brand loyalty. Therefore, this study hypothesized as follow:

H4: brand awareness is positive related to brand trust.  
H0<sub>4</sub>: brand awareness is not positive related to brand trust.

H5: brand trust is positive related to brand loyalty.  
H0<sub>5</sub>: brand trust is not positive related to brand loyalty.

## 2.3 Brand image

According to Keller (2001), Brand image can be seen as all the different awareness, beliefs, opinions, and behaviors customers related to their brand, whether created purposefully by the corporation or not. In the recent years, a widely accept that brand image includes a consumer's knowledge and beliefs about the brand's various products and its non-product attribute. The better the brand image, the better the quality as perceived by customers (Lee, Lee and Wu, 2009; Iversen and Hem, 2007). And some scholars also defined brand image symbolize the individual implication about a brand that customer have kept in mind (Iversen and Hem, 2007). Besides, other scholar also define brand image is the overall emotion image the customers holds about the brand and can be seen in isolation or in relation to other brands (Faircloth, 2005).

In some researchers' study, a different level of brand image may affect brand association, brand loyalty and perceived quality, and if this three dimension change will also cause overall brand equity' change (Lee, Lee and Wu, 2009). In (Mourad et al, 2010)'s research, brand image is directly affect perceived quality, then the perceived quality is directly affect brand loyalty. Therefore, this study was conceptualized a relationship between brand image and perceived quality.

In addition, some scholars developed some factors that can affect brand image, which include: price, after sales service, personality, social image, positioning, relationship, location, country of origin and staff, all of these factors are belong to brand image attributes, and with brand awareness, consumer attributes, as the three sub-component that directly affect brand equity, (Mourad, Ennew and Kortam, 2010).

In summary, brand image is very important that have a great effect on brand equity as well as brand awareness, brand managers should also develop a brand image strategy to enhance the image that customer had stored in mind. If brand managers cannot do well with the brand image, a mismatch of brand image with a consumer's expectation will give a chance for competitors (Janonis and Virvilaitė, 2007), and lost companies' market share and even loyalty customers. Sometimes, A good advertising can help companies develop a global brand image and enrich its brand equity (Arora, Raisinghani, Arora and Kothari, 2009). A better image may appear differentiation in customers' mind, then affect customer purchase intension, finally contribute to a better brand loyalty and brand equity. And then the strong brand image will delivering a positive effect to brand loyalty and brand equity. Therefore, this study hypothesized as follow:

H6: brand image is positive related to perceived quality.  
H0<sub>6</sub>: brand image is not positive related to perceived quality.

## 2.4 Brand loyalty

In the early 1990s, loyalty was shown to be one of the fundamental drivers of company profitability (Reichheld, Markey Jr and Hopton, 2000). But for a long time, brand loyalty has been one of the most discussed and most misunderstood marketing concepts (Kabiraj and Shanmugan, 2010). Some scholars defined brand loyalty is a preference for a certain brand that lead to its repeated purchase behavior (Arora, Raisinghani, Arora and Kothari, 2009). According to Oliver (1999), he defined brand loyalty is an extremely promise to repurchase a preferred brand or product consistently in the future, thus causing repetitive same-brand purchasing behavior, and ignore the potential affect by situational influences and marketing efforts. Loyalty is widely accepted that divide in two concepts, behavior loyalty

and attitudinal loyalty. Behavior loyalty is defined as the willingness of the average consumer to repurchase the brand. Attitudinal loyalty is the level of commitment of the average consumer towards the brand (Chaudhuri and Holbrook, 2001). But it's a counterpart, some scholars defined brand loyalty refers not only to one's preference to repurchase or repatronize the same brand over and over, but also to have a psychological commitment or attitudinal bias toward the brand (Schoenbachler, Gordon and Aurand, 2004). Similarly, According to Yoo and Donthu (2002), pointed out brand loyalty refers to overall attitudinal commitment toward the brand as an attitudinal index of behavioral brand loyalty. Loyalty as a general commitment that causes consumers to purchase a brand time after time and resist switching to another (Veronique and Descotes, 2012). However, all these explanations are supported Oliver's definition.

Brands higher in attitudinal loyalty will cause higher relative prices and lead to greater willingness to sacrifice by paying a premium price for a valued brand (Chaudhuri and Holbrook, 2001). Thereby, brand loyalty is a valuable asset for every brand (Nguyen, Barrett and Miller, 2010). Thus, a better brand loyalty will generate more profit and market share, that it can reduce marketing cost and may be helpful for building brand equity. Besides, it is also a core dimension of brand equity (Aaker, 1996).

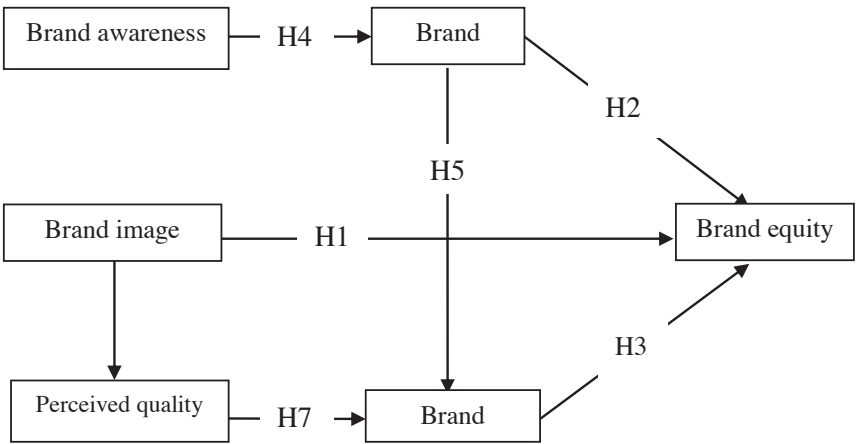
On the other hand, Zeithaml (1988) suggested that perceived quality reflects an overall judgment, and some scholars suggested perceived quality can enhance brand loyalty by increasing customer satisfaction and providing reasons to purchase the product (Arora, Raisinghani, Arora and Kothari, 2009). Moreover, Rios and Riquelme (2008) and Aaker (1991), indicates that loyalty can be influenced by the other dimensions of brand equity, which is perceived quality. Linking the above information, it seems perceived quality has a positive impact on brand loyalty. Therefore, this study hypothesized perceived quality is positive related brand loyalty.

- H7: perceived quality is positive related brand loyalty.  
H0<sub>7</sub>: perceived quality is not positive related to brand loyalty.

### 3. Conceptual Framework

Based on the above literatures and hypothesis, this study combined several relationships, which include brand awareness, brand image, perceived quality, brand trust, brand loyalty and brand equity, then proposed a framework as follows to applied in the China's antivirus software industry.

Figure 1: Conceptual Framework



### 4. Methodology

#### 4.1 Population and sample

This research is similar to most literatures, it applied a quantitative methodology for complete this research, the questionnaire is necessary. As a result, this research was designed the questionnaire and use online survey system for data collection, the first step is to decide sample, it used the formula:

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

This formula is come from Yamane, (1967). In his research, this simple formula also uses to calculate sample size. The meaning of this formula as follows:

n = Numbers of sample or sample size

N = The population in this study who are the user of antivirus software in China, according to CNNIC (China Internet Network Information Center)'s statistical data, at the end of 2013, China internet user had reached 590 million, there are 96.5% internet user using antivirus software. Hence, the population of this study is 569 million.

e<sup>2</sup> = probability of error, this study was 95% confidence level, this number is 5%.

So this calculator will be:

$$n = \frac{560,000,000}{1+560,000,000(0.05)^2}$$

n=399.99 samplings

Base on this equation, the study was required 400 participants; also the questionnaire was design online, and conducts a random online survey in order to collect data.

#### 4.2 Research Instrument

The instrument for this study is questionnaire, author was based on the former literature to construct a questionnaire, all the questionnaire from other literature was adapted in order to fit this research topic. The questionnaire consisted seven parts: They are demographics factor, brand awareness, brand image, perceived quality, brand trust, brand loyalty and brand equity. The part2- part7 was used likert scale for respondents to fill within five points, from (1) strongly disagree, (2) disagree, (3) uncertain, (4) agree, (5) strongly agree. All the question was designed in English, and then it was be translated in Chinese,

#### 4.3 Reliability

In this study, a Cronbach's alpha was used for measure the reliability of questionnaire, reliability test is an assessment of the degree of consistency between multiple measurements of a variable. The Cronbach's alpha coefficient was used to estimate the internal consistency and reliability of measures (Malhotra and Birks, 1999). The Cronbach's alpha value with great than 0.7 will be reliable in the data collection. If the value more close to 1 that means the question is more reliability. The coefficient value will be calculated by using the statistics software, conduct the Cronbach's alpha test can make sure whether the questionnaire is reliability or not.

4.4 Data collection

All the data was be collected from online survey, so a survey website was necessary, author selected one of the famous online survey website in order to complete data collection. According to website's system mechanism, if participants don't finish the questionnaire, it cannot submit to the website. Therefore, every questionnaire would be completed. Although the website can assure every participant finish the questionnaire, but in order to avoid the invalid respondents, this study was distributed 503 questionnaires, and chooses 400 valid questionnaires, the validity rate was 79.5%, and these 400 questionnaires were come from 25 difference cities of China, it was cover most area of China.

According to the questionnaire website, it is called WenJuan website, it is the Chinese biggest free online survey platform, it is serving more than 3000 enterprises. In this study, the simple random sampling was used through online surveys, and it was random sampling 400 valid questionnaires from this website, the user of this website comes from 25 cities of China and covers most areas of China. Thus, this website has a high level of representation and it can be trusted and reliability. Cause of the convenient sampling, the questionnaire was posted on this website and there have many respondents can see this questionnaire and choose to answer or not, this kind of sampling method is suitable for using cause of the large population. In addition, it is proper to use an online survey for this research, because the main topic is to study the brand equity on China antivirus software market, the user of antivirus software may use internet frequently, so they need an antivirus software to protect their information, conduct an online survey is easy to find respondents and collect data.

4.5 Data analysis

Structural equation model (SEM) was adopted to examine the relationship among brand image, brand awareness, perceived quality, brand trust, brand loyalty and brand equity. In general, Structure equation model is defined as the statistical procedure for evaluating the combined relationship of multiple independent variables (Lanza, 2008). Therefore, use SEM technique is considered as a valid method to measure this study's conceptual framework.

In addition, the descriptive statistics was used to describe the main characteristics of collection of information. In this study, the descriptive statistics technique was used to describe the demographic factors, such as gender, age, income per month and education levels. The descriptive statistics were used includes standard deviation, frequency and mean. This study was use inferential statistics technique to explain the relationship among brand image, brand awareness, perceived quality, brand trust, brand loyalty and brand equity. A statistic software was used for evaluating the goodness of fit. The goodness of fit describes how well it fits into a set of observations (Maydeu-Olivares and Garcia-Forero, 2010), as Chi-square, goodness of fit index, average goodness of fit index and root means square error of approximation index was used in this stage.

5. Results

In this study, a total 400 valid questionnaire had collected for brand equity research, From the chapter four, the result of demographic factor can be summary as male 47%, and female 53%, and major age of respondents is 25 - 32 years old (36.5%), major education level of respondent is bachelor degree (50.75%), major income per month is 4001-8000 yuan (31.75%), major occupation of respondents is company employee (54.50%), for the software using situation, the 360 antivirus is the major software that respondent used (68.25%).

Table 1: Reliability of Variables (Cronbach's alpha)

Variables	Pre-test	Actual
Brand awareness	0.86	0.867
Brand image	0.778	0.805
Perceived quality	0.892	0.856
Brand trust	0.877	0.855
Brand loyalty	0.876	0.820
Brand equity	0.942	0.864

This reliability analysis included six variables they were brand awareness, brand image, brand trust, perceived quality, brand loyalty and brand equity. For pre-test value was tested from 39 questionnaires, and the actual test was from 400 questionnaires.

The value of brand awareness: for pre-test the value is 0.860, for the actual test is 0.867. The value of brand image: for pre-test the value is 0.778, for the actual test is 0.805. The value of perceived quality: for pre-test the value is 0.892, for the actual test is 0.856. The value of brand trust: for pre-test the value is 0.877, for the actual test is 0.855. The value of brand loyalty: for pre-test the value is 0.876, for the actual test is 0.820. The value of brand equity: for pre-tset the value is 0.942, for the actual test is 0.864. Whether the pretest value and actual value is all above 0.75, according to the Nunnally (1978), the threshold should be higher 0.7, so it means all the questions are reliability.

Table 2: Correlation Analysis of Variables

Variables	BA	BI	PQ	BT	BL	BE
BA	1.000					
BI	0.787**	1.000				
PQ	0.694**	0.728**	1.000			
BT	0.672**	0.686**	0.766**	1.000		
BL	0.586**	0.614**	0.712**	0.729**	1.000	
BE	0.604**	0.625**	0.715**	0.717**	0.722**	1.000

NOTE: the asterisks means correlation is significant at the 0.01 level

From this table, it shows the correlation is significant in the 0.01 level, and the value range is from -1 to +1, the value more close to +1 means the high correlation, the value more close to -1 means the low correlation, in this study the correlation value range is from 0.586 to 0.787, in summary, the correlation of these variables were positive correlate.

Table 3: Convergent and Discriminant Validity

	Brand awareness					Brand image				Perceived quality			Brand trust				Brand loyalty				Brand equity			
	a1	a2	a3	a4	a5	BI1	BI2	BI3	BI4	P1	P2	P3	BT1	BT2	BT3	BT4	BL1	BL2	BL3	BL4	BE1	BE2	BE3	BE4
Brand awareness	a1	1																						
	a2	.707	1																					
	a3	.582	.607	1																				
	a4	.514	.497	.646	1																			
	a5	.460	.476	.522	.690	1																		
Brand image	BI1	.509	.415	.467	.532	.563	1																	
	BI2	.550	.515	.526	.487	.496	.611	1																
	BI3	.496	.478	.506	.484	.502	.460	.539	1															
	BI4	.563	.470	.543	.560	.459	.433	.435	.562	1														
Perceived quality	P1	.657	.566	.559	.494	.415	.495	.508	.488	.624	1													
	P2	.493	.503	.472	.374	.356	.492	.507	.457	.429	.685	1												
	P3	.549	.527	.503	.476	.440	.540	.545	.495	.528	.637	.671	1											
Brand trust	BT1	.565	.520	.489	.451	.421	.494	.556	.466	.451	.612	.583	.605	1										
	BT2	.498	.517	.482	.463	.473	.477	.527	.470	.457	.578	.545	.612	.719	1									
	BT3	.429	.375	.399	.365	.406	.481	.463	.333	.339	.528	.526	.552	.542	.582	1								
	BT4	.455	.467	.483	.416	.440	.416	.439	.468	.460	.540	.547	.553	.555	.551	.643	1							
Brand loyalty	BL1	.486	.455	.472	.392	.357	.415	.446	.414	.382	.637	.566	.535	.561	.521	.546	.619	1						
	BL2	.492	.420	.453	.375	.388	.484	.486	.383	.418	.573	.509	.538	.498	.482	.545	.538	.638	1					
	BL3	.523	.507	.471	.386	.436	.506	.514	.487	.419	.551	.544	.587	.542	.542	.502	.532	.553	.683	1				
	BL4	.270	.254	.271	.166	.284	.370	.308	.274	.140	.374	.408	.386	.352	.368	.470	.398	.427	.482	.517	1			
Band equity	BE1	.467	.404	.375	.363	.356	.460	.384	.373	.330	.541	.534	.554	.441	.475	.504	.430	.457	.506	.488	.539	1		
	BE2	.470	.429	.449	.400	.401	.476	.452	.386	.381	.553	.530	.584	.562	.563	.554	.533	.519	.566	.566	.444	.674	1	
	BE3	.427	.385	.387	.385	.396	.447	.481	.408	.399	.507	.470	.527	.506	.533	.473	.472	.495	.516	.514	.393	.537	.656	1
	BE4	.437	.377	.468	.466	.389	.495	.425	.372	.431	.536	.480	.548	.519	.503	.517	.497	.495	.527	.472	.440	.569	.619	.629



The table above was show the convergent and discriminant validity of this study, the convergent validity refers to the degree of difference measurement items that are theoretical tap to the same variable, thus, the value of correlation among a1 to a5 was higher than the a1 compare to the BI1, which means a1 to a5 can be measure the variable of brand awareness, and BI1 to BI4 cannot measure the variable of brand awareness. The discriminant validity refers to the difference measurement items that are theoretical to be unrelated, therefore, the table above can be proved both convergent and discriminat validity of this study.

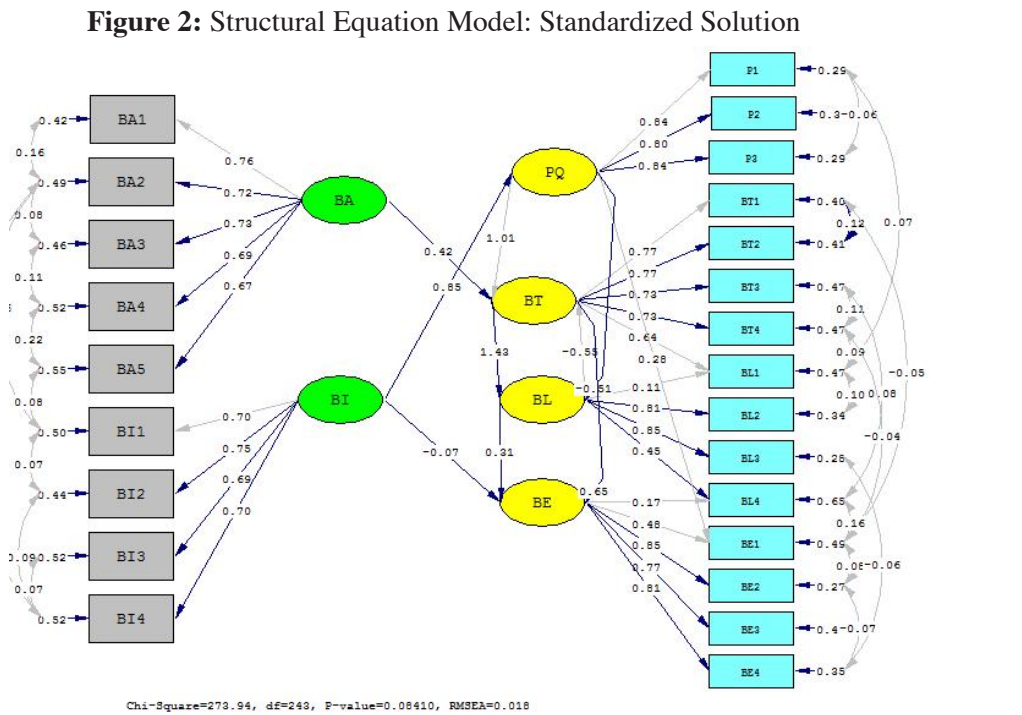
Table 4: Goodness of fit Statistic			
Absolute Fit Measure			
Degree of Freedom (df)	243		
Minimum Fit Function Chi-Square ( $\chi^2$ )	275.343	(P =0.0754)	
Normal Theory Weighted Least Squares Chi-Square	273.942	(P = 0.0841)	
Goodness of Fit Index (GFI)	0.946	>0.9	
Root Mean Square Residual (RMR)	0.0208	<0.05	
Standardized RMR	0.0295	<0.05	
Root Mean Square Error of Approximation (RMSEA)	0.0179	<0.06	
Incremental Fit Measure			
Adjusted Goodness of Fit Index (AGFI)	0.933	>0.9	
Normed Fit Index (NFI)	0.99	>0.9	
Non-Normed Fit Index (NNFI)	0.999	>0.9	
Comparative Fit Index (CFI)	0.999	>0.9	

The goodness of fit which indicated this model was good fit, after calculate the Normed Chi-square is 1.127, which is within the acceptable level, GFI is 0.946, RMR, SRMR and RMSEA close to 0.01 also within the threshold, in addition, the incremental fit measure all indexes are higher than 0.9 acceptable level.

Table 5: Standardized Total, Indirect Effects and Direct Effect.												
Cause \ Effect	Perceived quality			Brand trust			Brand loyalty			Brand equity		
	TE	IE	DE	TE	IE	DE	TE	IE	DE	TE	IE	DE
Brand awareness	--	--	--	0.23	-0.2	0.42	--	--	--	--	--	--
Brand image	0.85	0.0	0.85	--	--	--	--	--	--	0.47	0.54	-0.1
Perceived quality	--	--	--	0.73	-0.3	1.01	0.52	1.03	-0.5	--	--	--
Brand trust	--	--	--	--	--	--	0.8	-0.6	1.43	0.61	-0.0	0.65
Brand loyalty	--	--	--	--	--	--	--	--	--	-0.0	-0.3	0.31

Note: TE= total effect IE= indirect effect DE= directly effect

From the table, it showed the result was brand image is negative related to brand equity, and perceived quality is negative related to brand loyalty, other relationship were similar with previous literatures, brand awareness is positive related to brand trust, brand image is positive related to perceived quality, perceived quality is positive related to brand trust, brand trust is positive related to brand loyalty, brand loyalty is positive related to brand equity.



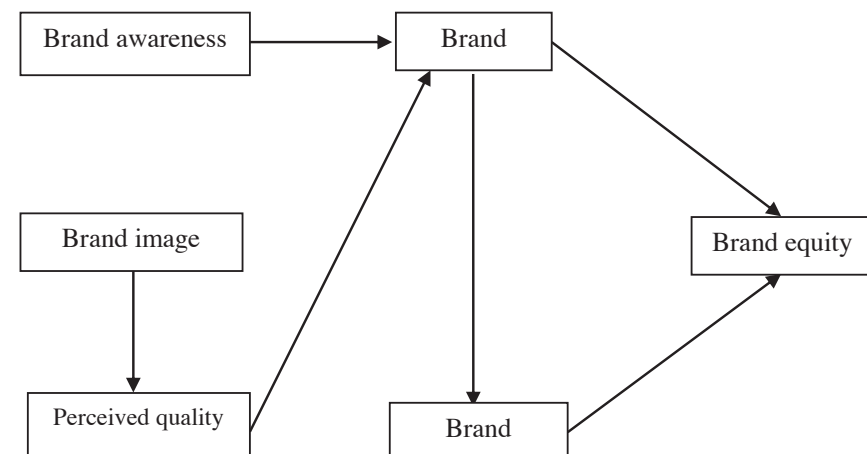
This figure was showed the standardized path coefficient among the observed variables and latent variables (brand awareness, brand image, perceived quality, brand trust, brand loyalty, brand equity), all the path are significant and this model's Chi-square is 273.94 with P= 0.0641, the measurement items were consistent with the data.

6. Conclusion

The result was partial support previous study, in this study, brand image had direct effect to brand equity as  $\beta = -0.07$ , the result was rejected the H1: brand image is positive related to brand equity, which means brand image cannot directly affect brand equity, there must be some mediators exists, brand image had the direct effect on perceived quality  $\beta = 0.85$ , which indicated that perceived quality is the mediator between brand image and brand equity. brand trust had direct effect to brand equity as  $\beta = 0.65$ , the result was support H2: brand trust is positive related to brand equity, brand loyalty had direct effect to brand equity as  $\beta = 0.31$ , the result was support H3: brand loyalty is positive related to brand equity, brand awareness had direct effect to brand trust as  $\beta = 0.42$ , the result was support H4: brand awareness is positive related to brand trust, brand trust had direct effect to brand loyalty as  $\beta = 1.43$ , the result was support H5: brand trust is positive related to brand loyalty, brand image had direct effect to perceived quality as  $\beta = 0.85$ , the result was support H6: brand image is positive related to perceived quality, the perceived quality had direct effect to brand loyalty as  $\beta = -0.51$ , the result was rejected H7: perceived quality is positive related to brand loyalty. The result which indicated that, perceived quality is not positive related to brand loyalty, from the table 15, perceived quality had indirect effect to brand loyalty as  $\beta = 1.03$ , that means perceived quality is not directly affect brand loyalty, and they need a mediator to mediate the relationship between perceived quality and brand loyalty, from figure 2, which shows perceived quality had a direct effect on brand trust  $\beta = 0.93$ , and brand trust had a direct effect on brand loyalty  $\beta = 0.2$ , that means brand trust is the mediator between perceived quality and brand loyalty. Thus, the proposed model can be modified as follows:



**Figure 3: Modified Conceptual Framework**



## 7. Discussion

The result was partial supported the proposed model, in the proposed model, brand image is positive related to brand equity, perceived quality is positive related to brand loyalty, although the result was rejected this relationship, they cannot directly created brand equity and brand loyalty, but the result indicated that, brand trust is the mediator between perceived quality and brand loyalty, in the research of Zeithaml (1988), there is relationship exist between perceived quality and brand loyalty, but the his finding was difference with this research, and the important thing was the environment, his research environment was base on America, and traditional companies, but for antivirus software company, which was not the traditional companies, it belongs to online companies, the main business for online companies which was based on internet, and countries also was another factor that affect the relationship, because this relationship had not been testing in software market of China.

In addition, in the research of Alam, Arshad and Shabbir (2012), they indicated that brand credibility as the mediator between perceived quality and brand loyalty, and perceived quality was not directly affect brand loyalty, brand credibility was a multi-characteristic term that included brand trust. Therefore, this finding was supported the modified relationship: brand trust as the mediator between perceived quality and brand loyalty. In the research of Lee, Lee and Wu, (2009), which indicated that brand image is directly affect perceived quality then enhance brand equity, that means the perceived quality was the mediator that mediate the relationship between brand image and brand equity. Therefore, it was support the modified relationship, perceived quality as one of the mediator between brand image and brand equity.

According to the hypothesis 2, 3, 4, 5, and 6 the results all supported these relationships, which are brand trust is positive related to brand equity, brand loyalty is positive related to brand equity, brand awareness is positive related to brand trust, brand trust was positive related to brand loyalty, brand image is positive related to perceived quality.

## 8. Implication

Establish a effectiveness brand strategy is a valid method to improve brand equity and earn more profit. For the software companies, most of them do not have the entity shop that can let customer touch and feel, it provided product and service base on internet environment, thus, most of the software companies only active within internet environment, and ignore the real environment, to find a effectiveness brand strategy must follow the step below.

First step, focus on the marketing activities whether online or offline, although the result indicated brand image have no relationship with brand equity, but it can through enhance the brand image, perceived quality and brand trust to improve brand equity. Thus companies should not ignore marketing activities. Generally, most companies think the user of antivirus software often active online, and they provide many advertise online, try to attract more customers, but compare the influence power, TV still has very big influence power in some degree, thus, focus on marketing activities can be helpful for creating brand trust. Moreover, a brand name that can remember easily is also important for building brand awareness, marketer must pay more attention on brand image and brand awareness, because they are the cornerstone of brand trust.

Second step, while companies get the effort from marketing activities, it must focus on the quality. Although the result indicated perceived quality have no relationship with brand loyalty, but it can indirectly improve brand loyalty through influenced on brand trust, and it is significant factor for online companies. A better product or service cannot only depend on marketing activities, a better product must include a better quality, better performance, for software companies, the major product is antivirus software, the quality for software means the software must have a better ability of killing virus, and protect user's data and information, thus, the technology is very important for antivirus software, a software which have a high technology that can kill more virus and protect user's system can make user trust and rely it, while the brand trust have been established, the company can earn more loyal customers, brand loyalty is most dominantly influenced by brand trust, for brand equity, it also most depend on brand trust and partially depend on brand loyalty, although companies can earn more loyal customers through brand trust, but the difficult thing is to maintain the loyal customers, to maintain loyal customers, it must let customers feel this product have more value that worthy to buy or keep using, it can provide some extra service to add more value to the product, while customers feel more value from the product, they may keep using the product and service, finally, the brand equity can be effectiveness improved.

## 9. Limitation

The limitation in this study included the research method, the research method in this study was used quantitative method to study the influence factors of brand equity, all the relationship was base on the former literatures, lack of the real situation, which means this study can combined qualitative and quantitative method, it may get the better model, because most literatures was base on western countries, the west people's feeling and opinion was difference compare with Chinese, if this study can conducted some deep interview or focus group, it may get the more appropriate factors of brand equity.

Another limitation is the online survey, in the real life, when researcher collect questionnaires, it can interaction with respondents, and explain the question, and observed the attitude of the respondents, that can be judged which questionnaire is valid. But for the online survey, researcher cannot know respondent's attitude, and cannot explain to them.

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Appendices

Questionnaire

**Part 1:** demographic factors, this part will ask you some question about your personal information. Please fill √ in the blanks below: (each question only have one choice)

1. Are you using or used a antivirus software?  
☐ Yes ☐ No
2. What is your age?  
☐ Below 18 ☐ 18-25 ☐ 26-32  
☐ 33-40 ☐ 41-50 ☐ 51-60
3. What is your gender?  
☐ Male ☐ Female
4. What is your education level?  
☐ Below junior school ☐ Junior school ☐ Senior school  
☐ Junior college ☐ Bachelor degree ☐ Master degree  
☐ Doctor degree
5. What is your income per month?  
☐ Below 1,000 yuan ☐ 1,000-2,000 yuan ☐ 2,001-3,000 yuan  
☐ 3,001-4,000 yuan ☐ 4,001-8,000 yuan ☐ More than 8,000 yuan
6. What is your occupation?  
☐ Student ☐ Company employee ☐ Government employee  
☐ Teacher ☐ Engineer ☐ Businessman  
☐ Worker ☐ Scholar ☐ Freelancer  
☐ Other \_\_\_\_\_.
7. which software did you used or using? (Choose the most frequently you used)  
☐ 360 antivirus ☐ Rising antivirus ☐ Tencent guanjia  
☐ Kingsoft ☐ ESET NOD32 ☐ Kaspersky Anti – Virus  
☐ G-Data ☐ JiangMin ☐ AVG antivirus  
☐ Norton ☐ Avira Antivirus ☐ Avast  
☐ McAfee ☐ Bitdefender Antivirus ☐ Microsoft Security Essentials  
☐ Others\_\_\_\_\_.

**Part 2:** this part including question of brand awareness, brand image, perceived quality, brand trust, brand loyalty and brand equity. Please base on the item that you selected in question 7 above to answer the question below. Each question in the questionnaire will be answer within five points, from (1) strongly disagree, (2) disagree, (3) uncertain, (4) agree, (5) strongly agree. Please fill √ in the blanks below:

2.1 Brand awareness	Strongly disagree----Strongly agree				
	1	2	3	4	5
2.1.1 I am aware of this software.					
2.1.2 This antivirus software I am really familiar with.					
2.1.3 When I think of antivirus software, This software comes to my mind.					
2.1.4 I know how the symbol of this software brand looks like.					
2.1.5 I can quickly recall the logo of This software.					

2.2 Brand image	Strongly disagree----Strongly agree				
	1	2	3	4	5
2.2.1 This software is strong in characteristic					
2.2.2 This software had an attractive brand					
2.2.3 This software provide many extra service not only provide antivirus service.					
2.2.4 This software that I am using had a well known brands.					

2.3 Perceived quality	Strongly disagree----Strongly agree				
	1	2	3	4	5
2.3.1 This software that I am using had an excellent quality.					
2.3.2 This software that I am using had an superior performance.					
2.3.3 This software that I am using had an excellent reliability.					

2.4 Brand trust	Strongly disagree----Strongly agree				
	1	2	3	4	5
2.4.1 This software meet my expectation.					
2.4.2 I feel confidence in this software.					
2.4.3 This software never disappoint me.					
2.4.4 I could rely on this software to solve my problem.					

2.5 Brand loyalty	Strongly disagree----Strongly agree				
	1	2	3	4	5
2.5.1 I use this software because it is the best choice for me.					
2.5.2 I consider myself to be loyal to This software.					
2.5.3 In the future, I would like to keep using or purchase This software.					
2.5.4 I would not switch to other brand, even if I had a problem with This software.					

2.6 Brand equity	Strongly disagree----Strongly agree				
	1	2	3	4	5
2.6.1 It makes sense to buy or use this software instead of any other brand, even if they are the same.					
2.6.2 Even if another software has same features as this software , I would prefer to buy or use this software.					
2.6.3 If there is another brand as good as this software, I prefer to buy or use this software.					
2.6.4 If another brand is not different from this software in any way, it seems smarter to purchase this software.					

THE RELATIONSHIP BETWEEN INTEGRATED MARKETING COMMUNICATION AND MARKETING COMMUNICATIONS’ OBJECTIVES OF MARKETING DIRECTORS IN THAILAND

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2.6 Brand equity	Strongly disagree----Strongly agree				
	1	2	3	4	5
2.6.1 It makes sense to buy or use this software instead of any other brand, even if they are the same.					
2.6.2 Even if another software has same features as this software , I would prefer to buy or use this software.					
2.6.3 If there is another brand as good as this software, I prefer to buy or use this software.					
2.6.4 If another brand is not different from this software in any way, it seems smarter to purchase this software.					

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## Abstract

This research aims at studying the communication marketing plan with marketing communication's objectives so as to explain the different objectives of communication and business marketing goal. Especially the Integrated Marketing Communication (IMC) is implemented more important than former promotional mix. The several communication tools are implied with their objectives for affecting the consumer's buying decision and increasing competitive advantage. Owing to each tool would be supportively to each other for information accessing to target. The research tool was a semi-structured interview guide which consisted to the research objective for studying the implementation of communication tools and their objectives. The specific sampling was selected to imply for interviewing because of the convenience to each other. This research was focused on the relationships of IMC and marketing communication's objectives of more than 20-year companies in Thailand by interviewing from marketing executives, directors and/ or managers. Combining with the marketing plan from the annual report, executive report and performance documents and websites. Data analysis was content analysis and concluded each sample and also each business group.

The findings were found that companies of vehicle manufacturer and dealer as automotive industry leaders in Thailand, the marketing communications were presented focusing on presentation of products' guaranteed awards, and highlight features by marketing communication via public broadcasts as above the line medias such as television, radio, and printed medias including supporting channel as below the line media for brand perception, awareness, and purchasing motivation. The businesses of consumer product focused on the businesses of consumer product mostly focused on through the line medias by integrated marketing communication of several tools via above the line medias more than below the line medias so as for brand perception, awareness and developing to brand loyalty. For service businesses, they focused on several marketing communication channels as through the line which presented services, convenience, comfort place, customer relation management (CRM), and public interest activities (Corporate social responsibility: CSR) for brand image creation, brand perception, and stimulate their purchasing that focusing on service, convenience and comfort and also physical evidence such as internal designs and perceptual presentation of services with the objectives of clients' motivation and most satisfaction more than advertising but sales promotion that stimulate purchasing in a short specific period only.

**Keywords:** Marketing, Marketing Communication, Integrated Marketing Communication, Thailand

## 1. Introduction

Thailand's high economic growth at 8-9 percent per year during the late 1980s and early 1990s was interrupted by the "Asian Crisis" of 1997-1998. Since then, economic growth has been moderate, with period of robust growth, such as at around 5 percent from 2002 to 2007, followed by the fall-out from the global financial crisis of 2008-2009, the flood in 2011, and the impact of political tensions and uncertainty in 2010 and again in 2013-2015. As a result, economic growth in Thailand has lagged that in both low and middle income East Asian neighboring countries in recent years. In addition, such comparatively slower growth reflects the decline in global demand for Thailand's key exports such as hard drive disks and partly because of domestic factors including slowdown in government spending and withdrawal of consumption stimulus measures. Growth was 0.7 percent in 2014 and is projected to rebound to 3.5 percent in 2015. (Worldbank, 2015)

In the midst of strong competition including with the need of business strategy adjustment for further business growth and survive, the process of any production, human resource, and marketing management relative with all functions as a whole. The global expand rapid growth of business especially in Asian community since the second World War up to now, the free trade area established new market in Asian many countries for the international competitive advantage and regional cooperative economic development (Lelahongchuta & Worasilpchai, 2012). The intensity of business competition effects the administrative vision adjustment and all operations so as to cope with economic and sociological changes. Marketing strategy would be formulated essentially as a component of marketing plan for business goal attainment. From the causes of economic and competitive threats, most companies has tried to satisfy its consumers by using different approaches. Effective strategic management from the management level has proved a valuable instrument which helps firms to achieve their objectives. However, as important as effective strategic management is marketing strategy to increase sales volume and market share. Integrated Marketing Communication (IMC) has been used as a tool of the marketing strategies (Mongkol, 2014). Environmental forces are responsible for changes in business structures and require extensive market communication activities which lead to an explosion of the amount of costs that arise in the management processes. (Niekerk, 2007). IMC is more important than former promotional mix, via many types of marketing communication tools with any objective for competitive advantage and affecting the consumer's buying decision. Owing to each tool has advantage and disadvantage but supportively to each other.

For decades the advertising business was dominated by large. The advertising strategy for a national brand involved creating one or two commercials that could be run on network television, a few print ads that would run in general interest magazines, and some sales promotion support such as coupons or premium offers. However, in today's world there are a myriad of media outlets – print, radio, cable and satellite TV, and the Internet – competing for consumers' attention. Marketers are looking beyond the traditional media to find new and better ways to communicate with their customers (Belch & Belch, 2003). Hence, marketing is currently developed and changed according to various factors and circumstances to bring it into line with the conditions of the economy, society, culture and consumer behavior, and also with changing technology. Marketing communication is a general phrase that describe all types of different tools to deliver planned messages via different media to audiences while IMC is used to coordinate and align all communication's activities in every customer touch point in direction of one goal.

According to business opinion, the objective of integrated marketing communications or IMC is brand equity. This is achieved by integrating a variety of communication equipment efficiently and in full so as to access the target group specifically with the type of communications suiting their interests at an appropriate time and through an appropriate channel. Furthermore, marketing changes lead to the redesigning of marketing communications. Formerly, marketing communications were aimed at a large number of target groups. However, the current formation of marketing communications mainly focuses on reaching specific target groups more directly and intimately (Yukantavanijchai, 2010).

Marketing strategy means marketing plan formulation generally as an essential part of organization achievement consist of Product, Price, Place, Promotion (4Ps) or Marketing Mix. The concepts of marketing communication involve with mixing and integrating several communication channels. Thus, companies need to integrate many communication channels to deliver a clear, consistent and compelling message about the firm and its brands (Kotler & Armstrong, 2006). According to Kotler and Armstrong (2008), Integrated Marketing Communications (IMC) is a concept in which a "company carefully integrates and coordinates its many communication channels - mass media advertising, personal selling, sales promotion, public relations, direct marketing, packaging, and others - to deliver a clear, consistent, and compelling message about the organization and its products". The results of IMC are better communication that transform into consistent sales volume.

The integrated marketing communication goes beyond these specific promotion tools. The design, and packaging of the product, its container and packaging, its price, and the retail stores that sell the product, all communicate something to buyers. Thus, although the promotional mix is an organization's primary communication, the whole marketing mix including product, place, price and promotion must be coordinated in order to achieve the desired impact. The organization IMC helps the firm identify the target audience, and then helps the firm in designing a well-coordinated promotional program that focus on managing the customer relationship over time.

This article presents the concepts of marketing communication and integrated marketing communication as the integration of a variety of efficient channels as above the line, below the line, and through the line and its objectives. With the findings of marketing communications linking with their communication's objectives would be shown as the relationships of effective marketing communication tools and communication's objective depending on customer and product. The explanation of difference of communication aims and business marketing goals could be utilized for further marketing communication application for appropriate marketing communication strategy.

## 2. Literature Review

The promotional mix is one of the 4 Ps of the marketing mix. It consists of advertising, public relations, sales promotion, personal selling, and direct marketing. In this article, literature review would be explained from the evolution of promotional mix to marketing communication, integrated marketing communication and its objectives.

## 2.1 The Promotional Mix

A marketing plan is focused on the target market and made up of four key elements. These four elements are also known as the 4 Ps. One P is called the promotional mix and it contains advertising, public relations, sales promotion, personal selling, and direct marketing. They are used as tools to communicate to the target market and produce organizational sales goals and profits by specific combination of promotional methods used for one product or a family of products.

## 2.2 Marketing Communication

A marketing strategy may include an analysis of the situation, target segmentation, creative execution, advertising, promotions, direct and online marketing and evaluation (Kotler & Armstrong, 2006). Marketing communication comprises five main functions: marketing (direct), advertising, public relations, sales promotion and personal selling. Marketing assesses the market in which the organisation operates or plans to operate. Advertising employs various media for message dissemination; this includes television, radio, newspapers, magazines and the internet focusing on more non-personal forms of communication. Public relations establish and maintain a mutual understanding between the organisation and its stakeholders. In addition it acts as the social conscience of the organisation; it is the custodian of reputation and perception management and a vehicle for issues management and corporate social responsibility. Internal communication is one of its main areas of focus and much attention is given to this heightened need. Sales promotion is used to offer added value and a unique selling proposition, both often used to increase sales or awareness. Personal selling is often face-to-face and is undertaken by representatives of the organization (Fill, 2006).

The origin of many definitions rests with a promotional outlook, where the purpose was to use communications to persuade people to buy products and services. The focus was on products and on one-way communications, and there was a short-term perspective. The expression 'marketing communications' emerged as a wider range of tools and media evolved. In addition to awareness and persuasion, new goals such as developing understanding and preference, reminding and reassuring customers were recognized as important aspects of the communications effort. Direct marketing activities heralded a new approach as one-to-one, two-way communications began to shift the focus from mass to personal communications effort.

Keller explained that it could therefore be suggested that marketing communications is the "promotion" part of the marketing mix. Promotion is essentially communicating with current and potential customers about a specific product and persuading them to buy it. Integrated Marketing Communication is a step towards an integrated approach in achieving efficiency by synergy (Keller, 2001). By definition, it involves the merging of distinct communication functions in a way that allows an organization to speak with "one voice, one look" (Fitzpatrick, 2005). Marketing communication represents the "voice" of the company and its brands and is the means by which it can establish a dialogue and build relationship with customers.

Kotler and Armstrong (2008) point out that the marketing communications activities allow companies to connect their brands to people, places, experiences, feelings and objects. Marketing communications are the means by which firms attempt to inform, persuade and remind consumers - directly or indirectly - about the products and brands they sell. In a sense,

marketing communications represent the 'voice' of the company and its brands and are a means by which it can establish a dialogue and build relationships with and among consumers. The marketing communications mix consists of eight major modes of communication (Bennett, 1995; Kotler & Keller, 2009).

Marketing communications have become a fundamental aspect of marketing, a business vision and an essential factor in successful marketing communication. Its importance has increased dramatically in recent decades, considering that the marketing and communication are inseparable, all organizations business areas using various forms of marketing communication to make their offer and to meet financial or non-profit targets (Shimp, 2003).

Although marketing communications can play a number of crucial roles, it must do so in an increasingly tough communication environment. The media environment has changed dramatically in recent years. Traditional advertising media such as TV, radio, magazines and newspapers are losing their grip on consumers. Technology and other factors have profoundly changed when, where and how consumers process communications, and even whether they choose to process them at all. To understand the role of all the different types of marketing communications for brand building, a comprehensive, cohesive model of brand equity is needed.

Seven aspects make up a promotional mix, which includes tools used to carry out a company or organization's communication objectives (Belch & Belch, 2007). Communication objectives are the goals an organization plans to achieve through marketing. Example communication objectives include raising awareness, increasing comprehension, and developing a call to action. A promotional mix includes advertising, direct marketing, interactive media, sales promotions, publicity, public relations, and personal selling. Although there are seven aspects to the promotional mix, not every aspect is utilized with every IMC plan, but a brief explanation of all seven aspects is included below. Advertising is any form of communication about an organization, product, service, etc., that is paid for and is not personal. It is also the most widely known and discussed aspect of a promotional mix. Direct marketing occurs when a company communicates directly with the consumer and can then generate a sale or another response from the consumer. Interactive media occurs when there is a back-and-forth nature to the flow of information. Sales promotions, sometimes referred to as just promotions, typically highlight a product's extra value or might offer an incentive to an individual so that he or she purchases the product or service. The most common form of a sales promotion is a coupon.

## 2.3 Integrated Marketing Communication (IMC)

The theory and practice of advertising, public relations and sales promotion, were predominantly approached as individual disciplines within a broader marketing and management framework. An integrated marketing communication plan uses the same thematic message in different types of promotions. The idea behind the message remains consistent whether consumers see a magazine ad or the company's web page. An integrated marketing communication plan may leverage its multiple promotion sources. A print ad might direct consumers to enter a contest or sign up for personalized savings on a web site. Product packaging could play a role in an integrated marketing communications plan as well. IMC incorporates every form of communication to customers and includes the price of the product (that might create the perception of quality and exclusiveness), where the product is, how attractively it is displayed, advertising across multiple platforms, how the product is labeled and packaged, direct marketing, sponsorship and public relations.



According to Kitchen, Brignell, and Jones (2004), the main focus of IMC is on influencing the customer through communication, by beginning the communication process and then working it back to the communicator via customer feedback. This communication uses a network consisting of various points of contact between the brand and the customer as a message delivery channel. To maintain consistency in the message, every element and process in the marketing mix has to work in synergy and be coordinated.

Don E. Schultz who is considered to be the father of IMC says that "IMC is a strategic business process used to plan, develop, execute and evaluate coordinated, measurable, persuasive brand communication programs over time with consumers, prospects, and other targeted, relevant external and internal audiences" (Schultz, 2007).

Integrated Marketing Communications is the term used to describe the entire program by which you communicate with your customers. The "face, personality and spirit" of your company and products (all marketing mix variables) should blend together to present a unified message. In its simplest form, IMC can be defined as the management process of integrating all marketing communication activities across relevant audience points to achieve brand coherence. IMC is also referred to as a modern way of enhancing increase in product sales awareness and exposure (Pickton and Broderick, 2005).

From above mentioned concepts, it may conclude that IMC is systematic communications mix includes advertising, personal selling, public relations, publicity, sales promotions, direct marketing, internet, and other media channels in order to make informed purchase decisions.

In addition, Fitzpatrick mentioned that Integrated Marketing Communication is a step towards an integrated approach in achieving efficiency by synergy. By definition, It involves the merging of distinct communication functions in a way that allows an organization to speak with "one voice, one look" (Fitzpatrick, 2005)

In summary, IMC is an approach communicate about promotional message and also other marketing mix (product, place, and price) used by organizations to brand and coordinate their marketing efforts across multiple communication channels. The primary idea behind an IMC strategy is to create a seamless experience for consumers across different aspects of the marketing mix. Integrated marketing communication is consumer oriented approach rather than organizational oriented that focuses on organizational needs. It combines these disciplines to provide clarity, consistency and maximum communication impact. The brand's core image and messaging are reinforced as each marketing communication channel works together as parts of a unified whole rather than in isolation. Objectives of the marketing communication are to provide information to target audience and to boost the sales.

## 2.4 The Importance of IMC

IMC is the coordination and integration of all marketing communication tools, avenues, and sources within a company into a seamless program, which maximizes the impact on consumers and other end users at a minimal cost. This integration affects all of a firm's business - to - business, marketing channel, customer focused, and internally directed communications. The marketing mix consists of Products, Pricing systems, Distribution systems, Promotional programs. The promotional mix consists of: Advertising, Sales promotions (including consumer and trade promotions), Personal selling activities. The IMC mix also includes Direct Marketing, Public Relations Programs, Internet Marketing, Sponsorship Marketing, and Database Marketing (Shimp, 2003).

The basic premise of IMC is that a number of communication objectives exist for a brand and there are various different communication methods that can be used to achieve those different objectives (Keller, 2001). In other words, multiple and united options are advised that use two-way communication (Schultz, 2007) through interactive media (Belch & Belch, 2003). Therefore, communication is at the heart of IMC. For Shimp, marketing is communication and communication is marketing. All organisations use various forms of marketing communication to promote their offerings. Further, a service is a communication experience and when the client experiences emotional 'heat' through the experience it increases the brand's equity and adds value for the customer through a positive experience (Shimp, 2003).

In the traditional approach to marketing communications, businesses and their agencies plan separate campaigns for advertising, press relations, direct marketing and sales promotions. Integrated campaigns use the same communication tools to reinforce each other and improve marketing effectiveness. In an integrated campaign, you can use advertising to raise awareness of a product and generate leads for the sales force. By communicating the same information in press releases and feature articles, you reinforce the messages in the advertising. You can then use direct mail or email to follow up inquiries from the advertising or press campaigns and provide prospects with more information. To help convert those prospects to customers, you can use telemarketing to sell directly or make appointments for the sales team.

The ability of a company to utilize an outside-in approach and to portray a consistent image to prospects and existing customer groups becomes a critical success factor in competitive and information-rich market places (Jin, 2003). Hence, businesses should focus on marketing messages via several tools across all communication channels in order to strengthen brand and corporate image with a clear, consistent, impactful message and result driven communications.

Hence, consumers should consider who makes the product, for what purpose or benefit it stands and links the brand to people, place, events, experiences, and feelings. And for Integrated Marketing Communication of business enhances companies' ability to reach the right customer with right message at the right time and in the right place by the right channel of communication.

IMC is a promotional tool along with other marketing mix components to gain advantage over competitors using to reach highest level of consumer satisfaction by knowing the right touch-points. It is a data driven approach using outside-in thinking focused on identifying consumer insights using both on and off -line channel strategy to develop a stronger brand-consumer relationship (Sisodia and Telrandhe, 2010). Thus, integrated marketing communication is thus the voice of marketing creating brand awareness, deliver information, educate the market and make a positive image of the company.

In Summary, Integrated Marketing Communications is a simple concept. It ensures that all forms of communications and messages are carefully linked together. At its most basic level, Integrated Marketing Communications (IMC) means integrating all the promotional tools, so that they work together in harmony. This is enhanced when integration goes beyond just the basic communications tools. There are other levels of integration across the marketing mix and across business functions production, finance, distribution and communications should work together and be conscious that their decisions and actions send messages to customers. Although Integrated Marketing Communications requires a lot of effort it delivers many benefits. It can create competitive advantage, boost sales and profits,

while saving money, time and stress. In which today, most business implies above the line (ATL) as mass medias such as television, cinema, radio, print, and out-of-home to promote brands or convey a specific offer, below the line (BTL) as specific channels such as direct mail, public relations and sales promotions for which a fee is agreed upon and charged up front. Below the line advertising typically focuses on direct means of communication often using highly targeted lists of names to maximize response rates. And through the line (TTL) with different advertising techniques, refers to an advertising strategy involving both above and below the line communications. This strategic approach allows brands to engage with a customer at multiple points. This enables an integrated communications approach.

## 2.5 Integrated Marketing Communication Objectives

As a customer centered process integrated marketing communication is the first step in developing a common understanding of its purpose and value. Integrated marketing communication integrates everything that helps a company to promote its business and position its product in the market. An integrated marketing communication program must be continuous and strategic oriented.

The objective of integrated marketing communications, or IMC is brand equity. This is achieved by integrating a variety of communication equipment efficiently and in full so as to access the target group specifically with the type of communication suiting their interests at an appropriate time and through an appropriate channel. Marketing changes lead to the redesigning of marketing communications. Formerly, marketing communications were aimed at a large number of target groups. However, the current formation of marketing communications mainly focuses on reaching specific target groups more directly and intimately. The informed customer of the twenty-first century will have extensive knowledge about the product category or even the company in general (Schultz and Kitchen, 2000). So that means brand equity would be emerged from brand perception, awareness and developing to brand loyalty if it combines with consuming experience positively. Most important consideration in marketing communication plan understands target group and appropriate channel. As IMC theoretical content, after grouping the customers into segments, promotional activities should be integrated such that they work according to the overall strategic IMC plan in order to accomplish the set marketing communication objectives. It must not be overlooked that communication between customers and organization should be a two - way process, that is, a dialogue or an exchange of information (Schultz, 2007).

Summary, the integrated marketing communications have a highly complex content, both in terms of scope and the objectives pursued and on methods and tools for action. Considering that the primary purpose of marketing communication is to build and strengthen the brand. While the main market competitors have become brands. Many opinions of experts converge to the idea that in the contemporary era the marketing communication will be the only way to create and sustaining competitive advantage.

## 3. Scope of the Study

This study was planned schedule for searching the secondary data of business background, IMC implementation, and its objectives and results. Interview guide was generated simultaneously according with the concepts and theory of Integrated Marketing Communication as well. The samples were selected specific key informants of marketing communication affairs of famous long-time businesses in Bangkok, Thailand. For the whole period, this research from the beginning of reviewed literatures until interviewing process, analysis, conclusion and reporting, it could be reported within 12 months as condition of institutional research fund contract.

## 4. Methodology

### 4.1 Research Design

The data was collected primary data via businesses' websites and also online medias so as to study the famous brands in Thailand then selected more than 20 years famous of automotive businesses, consumer product, and service business by the limitation of time and budget. The researcher interviewed all key informants directly and concluded separately as marketing plan and communication tools' implication.

### 4.2 Scope of the Study

This study concerned with the contents of Integrated Marketing Communications (IMC) of the businesses in Thailand, specific sampling was selected to imply for interviewing with interviewees' convenience. The samples were specified by sufficiently data of IMC planning and tools using from Internet firstly, then more than 20-year businesses were selected and searched for the names of key informant as interviewee from its website.

The area of this study was focuses on famous brands in Bangkok, Thailand then selected more than 20 years of 8 companies by the interviewed issues of communication tools uses and their objectives. The list of key informants searching from internet with selected names of marketing director, marketing communication chief, marketing manager or planner of famous businesses with their willing to reply about the marketing and communication business plan.

### 4.3 Population and Samples

Population of this research is Key informant as the positions of marketing director, marketing communication chief, marketing manager or planner of famous businesses in Thailand. The samples could be specified business that its key informant was requested possibly for interviewing. Along 4 months, 8 businesses confirmed for interview date and time.

### 4.4 Data Gathering

The secondary data of business background and marketing communication details were gathered from their website and online media such as online newspaper or magazine. Primary data, interview confirmation as followed the interviewees' convenience by place and time, and informed them for the permit of sound recording so as to be confidence in conclusion correctly and obviously. The telephone call should be insisted gently before date 2-3 days. Interview guide was prepared and testing for recorder. Each interviewing was spending approximate at least 30 minutes to 1 hour depending on interviewee's convenience.

### 4.5 Data Analysis

Qualitative research was conducted to analyze communication tools uses and their objectives on 8 famous companies in Thailand, based on concepts and theories together with research results which were gathered from several texts, national and international journals.

## 5. Conclusion

The multinational automotive industry leaders in Thailand: Vice President of Sales Affair of Mazda Sales (Thailand) focused on mass medias via television, radio, printed media, and online marketing on web site presenting highlight product qualification to persuade customer's interesting with different features and capacities. Mazda presented both of awards and specific focused new type of Mazda 3. Besides, there were special offers overview of all types and special activities as sport sponsorship and motor exhibition for brand awareness for new customer and repeat brand equity to customer who have brand loyalty. Mazda's marketing communication objectives were to both of sales stimulation and brand image creation. Toyota K.Motors, a dealer of Toyota (Japan) Vice Managing Director focused on channels as above the line media, especially television, radio, online marketing, and printed medias such as newspaper, car magazines, catalogue and Leaflet. Including below the line medias were added highly such as sales person, road show or event marketing and also exhibition. Due to higher expenses of mass medias utilization than below the line, in the midst of much competition, the marketing executives mentioned the budget was reduced and adjusted to below the line such as event marketing or sport sponsoring which covering powerful channels that effecting the target directly. Senior Marketing Director of Volvo Car Thailand focused on mass medias via television, radio, printed media, and specific digital marketing on mobile application, website, and social media (You Tube to communicate the strengths of product or selling point according with customers' satisfaction. Additional, the promotional campaign can stimulate purchasing in a short time. Besides they always move forward to sport activities (sport marketing) so as to create and remind brand and corporate image as well

Businesses of consumer products: Marketing Manager of Thai Storage Battery focused on advertising via above the line medias more than below the line medias so as for brand perception, awareness and developing to brand loyalty. Chief of Public Relations of Thai President Food focused on advertising via above the line medias so as for brand perception, awareness, and purchasing motivation, including CSR as public activities' sponsoring for brand image and Marketing Director of SCG Paper, according to consumers' trend, marketing plan focused on innovative product and service development for competitive advantage strategy. For the marketing communication, he focused advertising via broadcast medias consisting of television, radio, personal selling, including billboard, event marketing, and occasional sales promotion. In Summary, the businesses of consumer product mostly focused on through the line medias by integrated marketing communication of several tools via above the line medias more than below the line medias so as for brand perception, awareness and developing to brand loyalty. Because of advertising via television and radio always access mass consumer, but some channels such as personal selling, sales promotion, and marketing for Corporate Social Responsibility (CSR) would be more implied.

Service businesses: the Assistant Chief Executive Director of staff Operation of Siam Commercial Bank presented several emphasized services and brand image via advertising on television, radio, printed media such as brochures and leaflets. Besides he created the climate of office identity for clients' convenience and efficient service providing, and also website, mobile application were developed widely for sales stimulation by product presentation with sales promotion. The Marketing and Communication Director of Advance Info Service (AIS) focused on advertising via television and printed medias such as brochure, newsletter and mobile applications to enhance service satisfaction, simultaneous improved modern service centers. The objectives of marketing communications were to repeat brand loyalty in a long

run. Besides he also focus on brand image creation with modern internal design, societal activities in both of human life quality and environment caring for corporate image maintaining as a planning of Corporate Social Responsibility (CSR) for enhancing brand image and loyalty. All service businesses focused on several marketing communication channels as through the line which presented services, convenience, comfort place, customer relation management (CRM), and public interest activities (Corporate social responsibility: CSR) for brand image creation, brand perception, and stimulate their purchasing that focusing on service, convenience and comfort and also physical evidence such as internal designs and perceptual presentation of services with the objectives of clients' motivation and most satisfaction more than advertising but sales promotion that stimulate purchasing in a short specific period only.

As a whole conclusion, most business deliver consistent message to buyers through an organization's promotions that may span all different types of media such as TV, radio, magazines, the Internet, mobile phones, professional selling, and social media. The different important reasons of their mixed marketing communication tools selection by objectives were separated by types of goods and service, for goods, marketing communication's objectives were focused on brand contacts and product's components. The advantage of product differ from its competitor would presented as selling point via above the line medias toward mass audience. For service businesses, they focused on service offerings via below the line toward client personally. The whole conclusion showed that most businesses usually focused on marketing messages via several tools across all channels of communication in order to create an organization a clear, consistent, impactful and result driven communications about its brand and corporate image.

## 6. Discussions

The marketing communications of automotive business, under the brands of Mazda, Volvo, and Toyota, focused on presentation of products' quality and features by marketing communication tools via public broadcasts as above the line medias, television, radio and other communications can be used to either build brand awareness or drive sales through specific offers by personal selling and sales promotions working together with printed brochure, and also trade fair twice a year, as same as Belch and Belch (2003) explained that the most common form of a sales promotion is a coupon and the final aspect of a promotional mix is personal selling. For the cases of service businesses, Commercial Bank and market rental business, they focused Sales Promotion strategies, Leaflets or brochures to expand sales and market share in the short run. And occasional social marketing concept is deployed in social development campaign projects for teenagers and environment. The specific goals of integrated marketing communication were for reminding brands, stimulating brand perception and loyalty in a long run with the selected channels for the objectives of purchasing stimulation. Besides advertising, including website, email or mobile application, and personal selling effect desired consumer behavior such as calling back for more information or purchasing order.

The consistent look and feel of a product, a brand, or even a campaign is critical to earn the customer perception and loyalty as Ángeles and Bailón (2011) mentioned that a cross - tool campaign that makes use of consistent messages is more effective in building brand images than a repetition strategy in which the consumer is exposed to the same message twice.



So Integrated Marketing is an approach to creating a unified and seamless experience for consumers to interact with the brand/enterprise; it attempts to meld all aspects of marketing communication such as advertising, sales promotion, public relations, direct marketing, and social media, through their respective mix of tactics, methods, channels, media, and activities, so that all work together as a unified force. It is a process designed to ensure that all messaging and communications strategies are consistent across all channels and are centered on the customer.

Brand contacts and product's components or selling point should be sent to target customer for brand awareness, brand and corporate loyalty according to the explanation of Singh (2007) that the main considerations in message design should include the link between the overall vision of the organization, the link between the main and sub-messages of the strategy and full understanding of the values, beliefs and attitudes of the target group.

For the results of brand awareness and brand equity from societal marketing, according to the finding of "The Research Studies on Brand Equity in 2009-2013" (Mattikon, 2014), the impacts of event marketing such as sport marketing, events, sponsorship, CSR activities, trade fair, or exhibition effected the positive brand equity that related with consumer's brand experience and attitudes and also correspond to Marketing Communications' objectives.

## 7. Limitation of research

The results may have limited generalizability. Due to the relatively small sample size, and budget and time limitations, the results might also not be truly representative of all types of long run and famous business in Thailand; majority of key informants in marketing communication plan were specified selection for complete finding consisting the research objectives even the study may not be generalizable to all businesses in Thailand.

## 8. Recommendations

The findings guided the recommendations divided to three parts as follows:

8.1 For inside preparation and planning: A cross-functional communication management team is established. This team consists of department heads across the organization. A team leader oversees, organizes and coordinates the group, but does not dominate the direction, discussion, or ideas. Each departmental head generates ideas, aids in the marketing communication strategy development, implementation, management, training, and results tracking for his or her own department. They make sure all communications are on strategy, on target, and approved by the team leader or IMC Manager. There is no individual departmental marketing of independent messages, themes, or looks. The cross-functional management team in an integrated company essentially expands the marketing responsibility beyond the marketing department and makes each employee a marketing representative.

8.2 For the communication selection and message design: marketing communication plan should clarify target audience consistent with communication channels and persuasive message.

8.3 For the further study, researchers should study the measurable customer's activity moving closer to purchasing behavior and the influence to a change in the behavior of prospects in the future because IMC programs consist of a variety of communication tools and measuring the interactive effects of all of these elements has proven to be much difficult.

8.4 The Marketing Communication research should be studied as exploratory research on boarder scope of business such as business of hotel, real estate, finance, manufacturing, transportation, and so on, with qualitative deeper specific communication objectives of brand loyalty building.

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## Guide for Authors

University of the Thai Chamber of Commerce International Journal of Business and Economics (UTCC IJBE) is published by University of the Thai Chamber of Commerce, and Thailand Management Association. It is published twice yearly in a spring and fall edition and is directed toward the needs of academia, practitioners, executives, researchers, students, and the general public interested in business management (i.e., Marketing, Service Management, Innovation and Design in Business, Finance, Banking, Accounting, Economics, Insurance and Risk Management, Production, Industrial and Operation Management, Strategic Management and Management, International and Global Business Management, Entrepreneurships, Organization Behaviour, Business Ethics, Business Law, Business System, Hospitality and Tourism Management, Human Resource Management, and Office and Facility Management).

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Manuscripts should be written in a manner that is interesting and readable to both practitioners and academics. It is beneficial to include a section regarding managerial implications and discussion of the consequences of applying the proposed ideas. Technical terms should be defined.