

## Leadership Style and Retail Store Performance – A Case Study of Discount Retail Chain

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### Key Words

Retail Management, Store Performance, Leadership Styles, Discount Retail Chain.

### Abstract

*This research attempts to understand the leadership styles of store managers in a discount retail chain and how leadership style impacts store performance. Store managers of a Fortune 1000 retailer based in the Midwest of the United States of America took part in the study. The Multifactor Leadership Questionnaire (MLQ) was sent to a sample of 135 store managers, and 103 of them completed the survey. Retail store performance is measured on four indicators namely, employee turnover, customer service scores, inventory shrinkage percentage and net profit margin. The retailer provided data related to the store performance indicators of the stores. Analysis of the survey data with performance data showed a moderate negative correlation between transformational leadership style and employee turnover rate, but a weak negative correlation between transactional leadership and employee turnover rate.*

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### Introduction

One of the main challenges of managing a retail store chain is in dealing with the uncertainty and inconsistency on how different stores perform. While retail chains select identical store locations, carry the same lines of merchandise, use the same floor layout, practice same operating policies and procedures, store performance can vary significantly from one location to the next (Stodnick, 2005). Figuring out what influences retail store performance brings retail managers a step closer towards understanding how store performance can be effectively impacted (Hise et al., 1983).

Some of the challenges store managers are faced with in their pursuit of running a successful store include managing the high employee turnover rate, delivering quality customer service, reducing inventory shrinkage and increasing profit margin. In dealing with these challenges, the retail industry mainly focused on management skills. The emphasis is on training and development of store managers with less emphasis and attention were given to build and use leadership skills. Because of today's fluid and dynamic business environment, it became increasingly apparent that leadership skills are necessary to the success of managers in all types of organizations, and retail organizations are no exception (Kim and Shim, 2003).

Personnel costs are second only to costs of merchandise in many retail organizations; however, personnel issues are not receiving the attention they deserve (Brief, 1984). Zaccaro and Klimonski (2001) believed organizational leaders will face significant challenges as human capital has become one of the most critical issues associated with gaining or sustaining a competitive advantage. Broadbridge (1999) assigns much of the high turnover rate in retail stores to the nature of the industry. Market forces often place pressures on retail companies to

respond quickly and act decisively to changing conditions, which in turn result in physical stressors and demands that are put on retail workers. These physical stressors and demands could be a contributor for an individual to leave the job causing the employee turnover. Bass (1990) asserted that leadership behaviors, when used effectively by managers, can be an important factor in influencing employees' decision to stay with the organization, therefore, reducing employee turnover rates.

Service quality can be defined as the result of a comparison customers make between experiences about the service and perception of the way the service was delivered (Gronroos, 1984; Lehtinen and Lehtinen, 1982; Parasuraman et al., 1985). Offering high levels of service quality is an area that is receiving significant attention from retailers as means to gain competitive advantage. From the view of the retail manager, the aim of achieving quality service involves offering a set of products and services that will exceed the customer's expectations (Sirohi et al., 1998). Once the target customer is satisfied with the product and service mix, the store has to offer, the final goal of the retail manager will be to achieve customer loyalty and increase the customer base for the store (Parasuraman et al., 1985, 1994; Zeithaml et al., 1988, 1996). However, rapidly changing the retail environment, with sophisticated and demanding consumers, force retailers to find new and creative ways to distinguish themselves from their competition in meeting the needs of their customers (Gaur and Agarwal, 2006).

Inventory shrinkage is the financial loss attributed to a combination of employee theft, shoplifting, administrative errors, and vendor fraud (Hollinger and Langton, 2003). A typical U.S. retailer loses about 1.5–2% of inventory to shrinkage (Howell and Proudlove, 2007). Reducing inventory shrinkage is necessary for retail stores because it leads to lower profit margins for retail companies. Retail companies have employed two management approaches in dealing with the losses incurred by shrinkage. The first approach deals with the problem by altering the store environment to preclude the possibility of theft. The second approach is to concentrate on the pre-employment hiring process, with the goal of minimizing the selection of job applicants who are likely to be involved in theft-related behaviors. No previous studies were found on the impact of store manager leadership skills and behaviors on retail store inventory shrinkage.

Retail companies evaluate profitability on margin results that include gross margin, contribution margin, and net profit margin. Net profit margin is a measure of a business unit's profitability. At the store level, a higher net profit margin suggests the store has better controls over its direct operating expenses compared with its competition (Kotsiopoulos and Jikyeong, 1998). No previous studies found that examined the impact of leadership skills and its effects on a store's net profit margin.

Increasing organizational performance and effectiveness is a topic that has become widely discussed in both academic and business circles since the 1980s (Bass and Avolio, 1994). One of the ways in which organizations can improve their performance is through efficient use of leadership skills. The work of Hambrick and Mason (1984a, 1984b) supports the idea that effectiveness of corporate strategies and improved performances are because of changes in leadership behaviors.

Since the theory of transactional and transformational leadership presented by Bass (1985), the leadership domain has witnessed an explosion in the number of studies examining the differences between transactional and transformational leadership styles and their relationship to the different employee and organizational results. Although a lot of research is conducted in the past 25 years on the impact of transactional and transformational leadership styles on employee and organizational results (Bass and Riggio, 2006), the existence of literature specifically focusing on the retail environment is limited.

Bass and Riggio (2006) described transformational leaders as leaders who inspire followers to achieve extraordinary results by providing meaning and understanding. They align the objectives and goals of individual followers with those of the larger organization, and provide followers with support, mentoring, and coaching. Transactional leaders, on the other hand, are described as leaders who provide followers with an exchange of rewards for compliance, and clarification of the work needed to earn the rewards (Yukl, 1989).

Although both transactional and transformational leadership styles offer the potential to influence performance results of a retail store, they have yet to be extensively tested in the retail environment to see what their broad impact is. Bass (1985) believed that transformational leadership is most effective in organizations facing uncertainty and change where leadership is needed to meet the demands of a changing environment. Transformational leadership is most useful in unstable environments, where organizations require the ability to respond to new demands and challenges, and employees are required to perform beyond expectations (Bass, 1998). Transactional leadership, in contrast, is effective in a stable environment, where promises are made for performance and rewards are given for meeting organizational goals and objective (Bass, 1985). In stable conditions, leaders are keepers of the status quo which can be maintained through the transactional process (Bass and Avolio, 1988). Research that addresses the impact of transformational and transactional leadership on retail stores' performance indicators will fill a void in the retail literature that will be of great value to both academics and practitioners in the field.

Retail executives have for many years been trying to figure out what the critical factors are impacting retail store performance (Hise et al., 1983). The focus in retail industry practices is to prepare and develop store managers with sound management skills (Shim et al., 2002). As the organizational management has shifted more towards the study of leadership skills as opposed to management competencies (Bolman and Deal, 1992), there has been a change in the interest and curiosity of retail executives in an attempt to find out exactly how leadership impacts performance and if there is any correlation between leadership style of managers and retail store performance results.

The study is an attempt to review and address the interest and curiosity of retail executives to find out how leadership impacts performance and if there is any correlation between leadership style of managers and retail store performance results. The retail store performance is measured on four variables namely, employee turnover, customer service scores, inventory shrinkage and net profit margins.

**The research questions that guided this study were as follows:**

R<sub>1</sub>: What is the dominant leadership style?

R<sub>2</sub>: To what extent does the leadership style correlate with their respective retail store performance?

**The following hypothesis were tested to answer the research question 'R<sub>2</sub>.'**

H<sub>0</sub>1: There is no relationship between the leadership style and employee turnover rate.

H<sub>1</sub>1: There is a relationship between the leadership style and employee turnover rate.

H<sub>0</sub>2: There is no relationship between the leadership style and customer service scores.

H<sub>1</sub>2: There is a relationship between the leadership style and customer service scores.

H<sub>0</sub>3: There is no relationship between the leadership style and inventory shrinkage percentage.

H<sub>1</sub>3: There is a relationship between the leadership style and inventory shrinkage percentage.

H<sub>0</sub>4: There is no relationship between the leadership style and profit margin percentage.

H<sub>14</sub>: There is a relationship between the leadership style and profit margin percentage.

### Research Method

Participants for the study were selected from a *Fortune* 1000 discount retailer with a store management population of 544 managers. A senior executive in the company sent a memo to all store managers before sending out a survey to tell them about the research and encourage them to complete the questionnaire. A random sample of 135 store managers was selected from a population of 544 managers. MLQ survey instrument is mailed to all 135 store managers. Within four weeks of sending the surveys, 103 surveys were completed and received, giving the survey response rate of 76%. The company provided performance data on employee turnover rate, customer service scores, inventory shrinkage, and net profit margins from the 135 stores taking part in the study.

### Data Analysis

#### Leadership Styles

To examine leadership styles, a series of descriptive statistics were used to present the range, mean, median, and standard deviation.

The transformational leadership style was calculated as follows:  $(IA + IB + IM + IS + IC) \div 5$ . Where; (IA) = Idealized influence (attributed); (IB) = Idealized influence (behavior); (IC) = Individual consideration; (IM) = Inspirational motivation; (IS) = Intellectual stimulation.

Transactional leadership was calculated as follows:  $(CR + MBEA) \div 2$ . Where; (CR) = Contingent reward and (MBEA) = Management-by-exception active.

The scores are shown in Table 1. The average scores in each component (such as IA, IM, IC, IM, & IS for transformational), were compared with the average US normative sample published in the *MLQ Manual* by Bass and Avolio (2004) to see if store managers in the retail chain had scores below, about the same, or above those of the US normative sample.

Table 1 compares data from the study with the U.S. normative sample as presented by the *MLQ Manual* (Bass and Avolio, 2004). The data in Table 1 show the mean, standard deviation, and range scores for the survey data compared with the U.S. normative sample.

Table 1. Comparison of Survey data with US Normative Sample

Leadership component	Survey results (N=103)			U.S. normative sample		
	M	SD	Range	M	SD	Range
Transformational						
Idealized influence (attributed)	3.02	0.55	2.25	2.95	0.53	3.50
Idealized influence (behavioral)	3.14	0.52	2.25	2.99	0.59	3.75
Inspirational motivation	3.22	0.52	2.00	3.04	0.59	3.50
Intellectual stimulation	2.96	0.60	2.62	2.96	0.52	3.50
Individualized consideration	3.27	0.49	2.25	3.16	0.52	3.00
Total	3.12	0.41	1.65	3.02	0.55	3.45
Transactional						
Contingent reward	3.09	0.53	2.00	2.99	0.53	3.50
Mgmt-by-exception (active)	1.69	0.84	3.47	1.58	0.79	4.00
Total	2.39	0.54	2.31	2.29	0.66	3.75
Other leadership outcomes						
Extra effort	3.37	0.48	2.00	2.79	0.61	4.00
Effectiveness	3.19	0.52	2.50	3.14	0.51	3.75
Satisfaction	3.32	0.54	2.50	3.09	0.55	3.50
Total	3.29	0.51	2.33	3.01	0.56	3.75

Store managers were identified as either transformational or transactional, based on their

average score (in the respective category) being at or above median value in the components that make up the particular leadership style. Store managers with high scores in both transactional and transformational leadership were identified as transformational. This is because Bass's (1985) model states that transformational leadership is an extension of transactional and is positioned on top of transactional. Transformational leaders, therefore, can have both high transformational and transactional scores; transactional leaders, on the other hand, are those with only high transactional scores.

Further, the leadership scores for both transformational and transactional leadership were divided into two categories, one below the median value and one at and above the median value (Fisher, 2006).

The number of store managers who were transformational compared with those who were transactional was split almost down the middle, with 47 managers showing a transformational leadership style compared to 56 showing a transactional style. This suggests the dominant leadership style of store managers at the discount retailer, therefore, was transactional.

The data in Table 1 indicate that survey respondents scored higher on four out of five transformational leadership elements than the U.S. normative sample. Only in the category of intellectual stimulation did the average score of 2.96 equal that of the U.S. normative sample. The average score for the transformational style of leadership was 3.12, compared to 3.02 for the U.S. normative sample. Transformational leadership scores are depicted in Figure 1. Among transformational leadership components, tested store managers scored highest in individualized consideration with an average of 3.27 and inspirational motivation with 3.22.

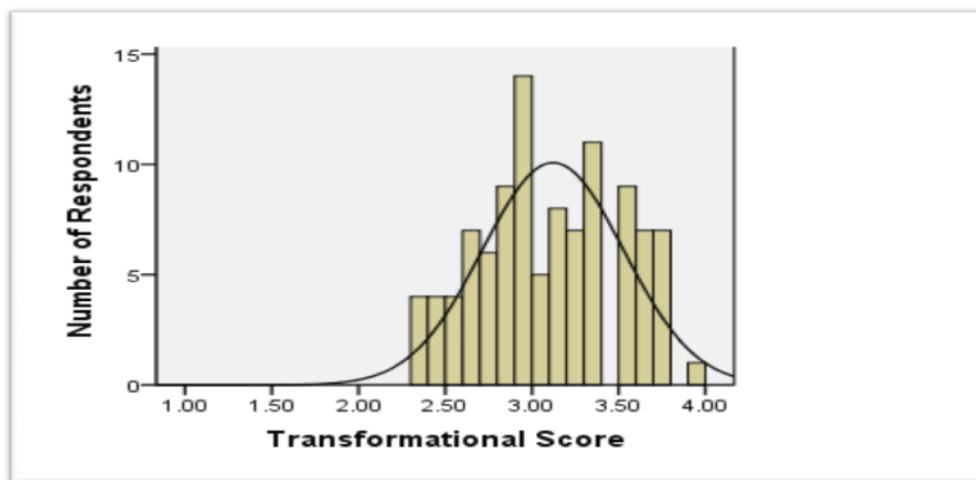


Figure 1. Transformational leadership scores. ( $N = 103$ ,  $M = 3.12$ ,  $SD = 0.41$ )

The standard deviation scores from the survey data were similar to those of the U.S. normative sample. While standard deviation scores from the survey data were between 0.41 and 0.84, the U.S. normative data had standard deviation scores that ranged between 0.51 and 0.79. Survey data scores for transformational leadership style had a standard deviation of 0.54, compared to 0.66 for the U.S. normative sample. Transactional leadership scores from the survey data had a standard deviation of 0.54, compared to 0.66. Other leadership outcomes from the survey data had a standard deviation of 0.51, compared to 0.56 for the U.S. normative sample.

Transactional leadership scores from the survey data were also higher than those of the U.S. normative sample. The average score for transactional leadership was 2.39, compared to 2.29 of the U.S. normative sample. Transactional leadership scores are depicted in Figure 2. The standard deviation for transactional leadership scores from the survey data was lower, with 0.54



for the survey data, compared to 0.66 for the U.S. normative sample.

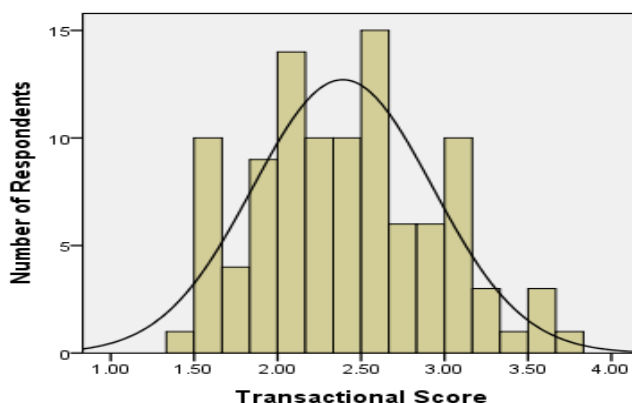


Figure 2. Transactional leadership scores. ( $N = 103, M = 2.39, SD = 0.54$ )

Scores recorded from the study for “other leadership outcomes,” which included extra effort, the effectiveness of leadership, and satisfaction with leadership was higher than those for the U.S. normative sample. The overall leadership score from the survey data was 3.29, compared to the U.S. normative sample of 3.01. Extra effort came out on top with 3.37, satisfaction with leadership was second with 3.32, and effectiveness of own leadership was 3.19.

**Leadership Style and Store Performance**

To examine the correlation between leadership styles and store performance (employee turnover, customer service scores, inventory shrinkage percentage, and net profit margin percentage), Pearson correlation coefficient was done. Testing of the hypothesis and analysis of the survey data with performance data are as follows.

**Leadership Style and Employee Turnover Rate**

- H<sub>0</sub>1: There is no relationship between the leadership style and employee turnover rate.
- H<sub>1</sub>1: There is a relationship between the leadership style and employee turnover rate.

Table 2. Correlation Analysis of Leadership Style and Employee Turnover Rate

Leadership style	R	r <sup>2</sup>	p
Transformational	-.590	-.348	.012
Transactional	-.159	-.025	.310

An ‘R’ value of -.590 with an associated p-value of .012, indicates a moderate negative correlation between transformational leadership and employee turnover rate. While an ‘R’ value of -.159 with an associated p-value of .310, shows a weak negative correlation between transactional leadership and employee turnover rate.

Therefore, H<sub>0</sub>1 was rejected for transformational leadership style but could not be rejected for transactional leadership style. H<sub>1</sub>1 could not be rejected for transformational leadership style but was rejected for transactional leadership style.

**Leadership Style and Customer Service Scores**

- H<sub>0</sub>2: There is no relationship between the leadership style and customer service scores.
- H<sub>1</sub>2: There is a relationship between the leadership style and customer service scores.

Table 3. Correlation Analysis of Leadership Style and Customer Service Scores

Leadership style	R	r <sup>2</sup>	p
Transformational	.197	.039	.246
Transactional	.039	.002	.694

An 'R' value of .197 with an associated  $p$ -value of .246, shows a very weak correlation between transformational leadership and customer service scores. While an 'R' of .039 with an associated  $p$ -value of .694, shows no correlation between transactional leadership and customer service scores. Therefore,  $H_{02}$  could not be rejected while  $H_{12}$  was rejected.

### Leadership Style and Inventory Shrinkage Percentage

$H_{03}$ : There is no relationship between the leadership style and inventory shrinkage percentage.

$H_{13}$ : There is a relationship between the leadership style and inventory shrinkage percentage.

Table 4. Correlation Analysis of Leadership Style and Inventory Shrinkage Percentage

Leadership style	$R$	$r^2$	$p$
Transformational	-.113	-.013	.256
Transactional	-.030	-.007	.407

An 'R' value of -.113 with an associated  $p$ -value of .256, indicates a weak negative correlation between transformational leadership and inventory shrinkage percentage. Similarly, 'R' value of -.083 with an associated  $p$ -value of .407, suggests no relationship between transactional leadership and inventory shrinkage rate.

Although no significant relationship was found between transactional or transformational leadership with inventory shrinkage percentage, both leadership styles were found to have negative correlations with inventory shrinkage rate. Therefore,  $H_{03}$  could not be rejected while  $H_{13}$  was rejected.

### Leadership Style and Profit Margin Percentage

$H_{04}$ : There is no relationship between the leadership style and profit margin percentage.

$H_{14}$ : There is a relationship between the leadership style and profit margin percentage.

Table 5. Correlation Analysis of Leadership Style and Profit Margin Percentage

Leadership style	$r$	$r^2$	$p$
Transformational	.029	.001	.907
Transactional	.012	.000	.771

An 'R' value of .029 with an associated  $p$ -value of .907, shows no correlation between transformational leadership and profit margin percentage. Similarly, 'R' value of .012 with an associated  $p$ -value of .771, shows no correlation between transactional leadership and profit margin. Therefore,  $H_{04}$  could not be rejected while  $H_{14}$  was rejected.

### Summary of Findings

The research found high transformational and transactional leadership scores. Scores in each of the five transformational leadership components and the two transactional components reflected higher than U.S. normative sample scores as reported by Bass and Avolio (2004).

Of the 103 participants in the study, 47 were found to have a transformational leadership style, while 56 had a transactional style; this equates to 46% transformational compared to 54% transactional. Based on the data collected and analyzed, the study finds out that transactional leadership was the dominant leadership style but only by a small margin. This finding was consistent with the transactional and transformational leadership literature (Bass and Avolio, 1994; Bass and Riggio, 2006). The literature states not only that transactional leadership is hierarchical and is the dominant leadership style in most organizations, but also, that transactional leaders go by the book and prefer to work within the existing rules and framework of the organization, and not trying to challenge them (Bass, 1985).

## Managerial Implications

The data analysis performed examining the relationship between leadership style, and employee turnover resulted in a moderate correlation between transformational leadership and employee turnover. These findings have significant implications for the retail industry. According to Joinson (1999), improving employee retention in the retail sector could lead to enhancing customer service and reducing employee theft. The combination of increasing customer service and reducing employee theft could potentially add up to a significant improvement in the store's bottom line profits.

When examining the transformational leadership subscales and their correlations with employee turnover rate, the two subscales with the highest scores were idealized influence and inspirational motivation. Idealized influence comes from the charisma that transformational store manager possesses, the vision and sense of mission, and the ability to instill pride, trust, and respect in followers (Bass, 1985). Inspirational motivation, on the other hand, is the ability of the transformational leader to excite followers with energy, give them a sense of direction, and boost their self-confidence (Bass and Riggio, 2006). The data analysis shows idealized influence and inspirational motivation to be the two components with the highest negative correlation with employee turnover rate. Training store managers to become more transformational and to focus on idealized influence as well as inspirational motivation behaviors could potentially be one of the ways in which retail stores can begin to prepare store managers to address the challenge of high employee turnover rate.

Another practical implication of the findings of this study is that executives of discount retail stores can use the Multifactor Leadership Questionnaire (MLQ) scores as one of the tools when selecting store manager candidates both externally and internally. Retail companies can target stores that have higher than average employee turnover rate by offering transformational leadership training to their store managers, with a particular focus on teaching them how to increase idealized influence and inspirational motivation behaviors that would be helpful and result in improving employee retention and reducing employee turnover rate.

## Recommendations for Future Research

This study has opened the door for new leadership research dealing with retail store performance. Although the results provided evidence of the association between leadership style and employee turnover rate, the researchers believe such a relationship warrants further exploration and investigation. A two-part longitudinal study of a retail store environment with the first part focusing on examining the correlation between leadership style and employee turnover, and the second attempting to understand exactly how transformational leaders may impact employee's intentions to stay longer with an organization might shed further light on this area.

Another recommendation is to consider broadening the scope of future studies to include a larger sample of store managers who come from different types of the retail store, and a larger geographic area that would include several U.S. regions. Broadening the geographic coverage can be valuable in helping understand if there are any regional differences in how leadership is practiced and how its impact may vary from one region to another.

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## Strategic innovation capability and firm sustainability: Evidence from auto parts businesses in Thailand

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### Keywords

Strategic Innovation Capability (SIC), New Product Establishment (NPE), Business Operational Excellence (BOE), Stakeholder Involvement Exaltation (SIE), Firm Sustainability (FSU).

### Abstract

*Innovation capability has been recognized as one of the key capabilities which influence organizational success and survival. The aim of this study is to investigate the relationship among strategic innovation capability's dimensions, its antecedents and consequences. The results were derived from a survey of 126 auto parts businesses in Thailand. The regression analyses suggested that strategic innovation capability dimensions consist of new idea enhancement, proactive activity support, market-driving encouragement, risk-taking circumstance acceptance, and dynamic adaptation commitment which have an important positive effect on firm sustainability. Likewise, the finding has shed light on the mediating role of stakeholder involvement exaltation. Moreover, the antecedents show positive influences on the strategic innovation capability dimension. Finally, theoretical and managerial contributions, conclusion, and suggestions for future research are also interesting to be discussed.*

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### 1. Introduction

In an era of radical change, firms face strong pressures to renew and update their business strategies and core competencies. The source of these pressures has been the arrival of new competitors, the emerging of new technology, and the variety and wariness in customer preferences and demands (Wang, 2011). In trying to respond, firms need to develop and improve their innovative capability. The dynamic capability theory explains the firm's abilities to create, reconfigure, and integrate firm resources and capability in order to generate new value for the firm (Teece, Pisano & Shuen, 1997). Managing these capabilities (especially strategic innovation capability) efficiently, one can effectively provide firms with a source of sustainable competitive advantage and firm sustainability. Hence, the key research question in this study is, "How does strategic innovation capability influence firm sustainability?" with the key objective to explore and highlight the relationships between strategic innovation capability and firm sustainability.

Since the concept of innovation capability has moved from a traditional role to strategic role, the term "Strategic Innovation Capability" is the perfect combination of innovation capability and strategy. It refers to the fundamental re-conceptualization of the business model and the reshaping of existing markets by breaking the old rules and changing the nature of existing competition, to achieve dramatic value improvements for customers and high growth for companies (Schlegelmilch, Diamantopoulos & Kreuz, 2003). Its primary concern is not only a limit to innovative creations, but also extends to the increase in revenues, productivity, customer satisfaction, and better strategic position.

This study is outlined as follows. The first part reviews the relevant literature in the area and streams of the five dimensions of strategic innovation capability, its consequence and

antecedents, links between the concepts of the aforementioned variables, and develops the key research hypotheses of those relationships. The second section explicitly details research methods, including data collection, measurements, and statistics. The results of the study derived from 126 auto parts businesses in Thailand are indicated, and their reasonable discussions with existing literature support are shown. The third section gives the results of the analysis and the corresponding discussion. The final section summarizes the findings of the study, points out both theoretical and managerial contributions, and presents suggestions for further research and the limitations of the study

## 2. Literature reviews and hypotheses development

Based on the extensive literature reviewed, there is little empirical research on strategic innovation capability integrating theory to describe the complete phenomena. To clearly understand the relationships among strategic innovation capability, its antecedents and consequences; the dynamic capability and contingency theory elaborated to explain the aforementioned relationships.

In this study, strategic innovation capability is the main variable and the center of this study. As described earlier, this study purposes that strategic innovation capability is positively and directly associated with firm sustainability. In addition, the mediating effects of new product establishment, stakeholder involvement exaltation, and business operation excellence are tested. New product establishment, stakeholder involvement exaltation, and business operation excellence are supposed to have a positive relationship with firm sustainability. Moreover, the five antecedents of strategic innovation capability (modern transformational leadership, organizational creativity orientation, business learning competency, firm resource availability and complementary technology growth), are investigated, and expected to yield positive relationships. Figure 1 illustrates the relationships among strategic innovation capability, antecedents and consequences.

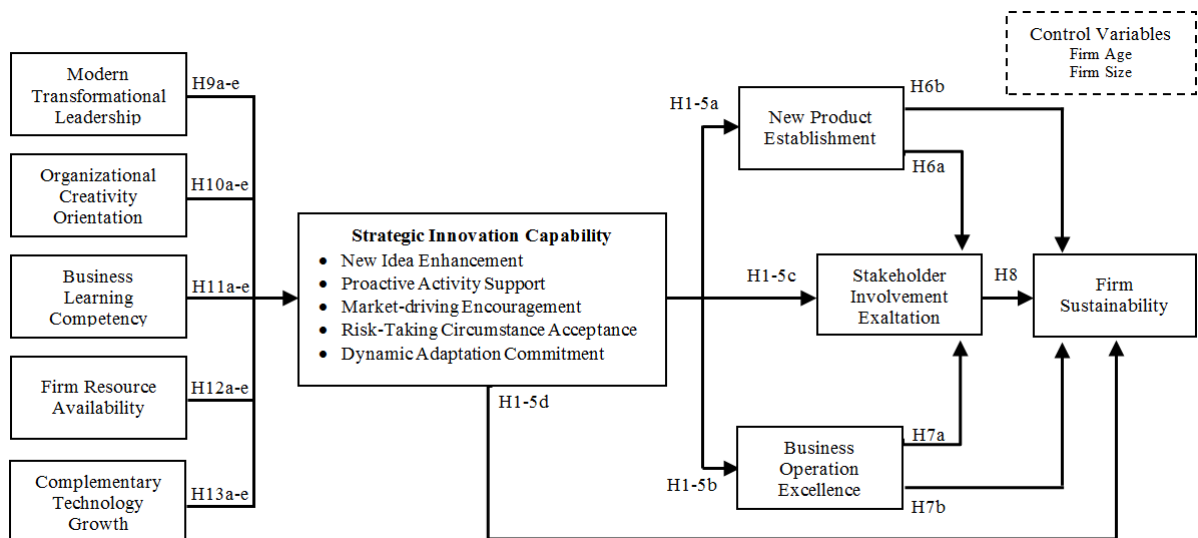


Figure 1: A Research Model of Strategic Innovation Capability

### 2.1. Strategic innovation capability

The field of innovation is very broad, and it has been defined in several ways (Chen, 2011). In the Schumpeterian tradition, innovation can be defined as something new (Schumpeter, 1934). It also refers to an adoption of an internally-generated or purchased device, system, policy, program, process, product, or service that is new to the adopting organization

(Damanpour & Evan, 1984; Damanpour, 1991). In addition, there has been much research and literature that illustrates the positive consequences of innovation. For instance, some syntheses of previous studies have noted that firm innovations are positively linked to market orientation, organizational learning, and performance (Calantone, Cavusgil & Zhao, 2002).

Beside, strategic innovation capability is defined as the combination of innovation capability and strategy. Strategy is the creation of a unique and valuable position, involving a different set of activities (Porter, 1990). It is viewed as a firm's conscious move to leverage its idiosyncratic endowment of firm-specific resources, and can bring a firm superior performance (Hamel & Prahalad, 1994; Lado et al., 2006). Strategic innovation capability is a philosophy of continuous improvement. It is the dynamic creation of creative strategic positioning from new products, services, and business models; and emphasizes that this framework was a dynamic view of strategy by which a company establishes sustained competitive excellence (Markides, 1997). More recently, strategic innovation capability refers to the degree to which the firm has the capability to redefine its business, to identify the implications of a business redefinition, to identify new business strategies, to identify core competencies, to enable the implementation of new strategies, to create new market segments, and to identify and use basic skills necessary to create a new business model (Preda, 2012; 2013). It involves achieving strategy transformation to establish competitive superiority over competitors (Kodama & Shibata, 2014).

According to the discussion above and the fundamentals of the dynamic capability theory, this study classifies strategic innovation capability into five distinctive dimensions comprising new idea enhancement, proactive activity support, market-driving encouragement, risk-taking circumstance acceptance, and dynamic adaptation commitment.

### **2.1.1. New idea enhancement**

Many researchers have mentioned that new idea establishment is the important source for innovation creation (Newell, Swan & Robertson, 1998), companies' revenue growth (McAdam & McClelland, 2002), and business effectiveness (Foo, Wong & Ong, 2005). According to Teece (2009), new idea generation is the ideation dimension of strategic innovation capability. It is the capacity to sense and shape opportunities and threats. A new idea can emerge in different ways and many are created by employees within existing firms (Nikolowa, 2014). However, in this study, the concept of new idea enhancement is not only limited to the generation of the new idea. It is defined as the firm's openness to the generation, creation, selection, implementation, and support of novel business initiatives, views, concepts and creations (Grimaldi & Grandi, 2005). Thus, the hypothesis is offered as follows:

*H1: New idea enhancement is positively related to, a) new product establishment, b) business operation excellence, c) stakeholder involvement exaltation, and d) firm sustainability.*

### **2.1.2. Proactive activity support**

Responsiveness refers to the discovering, understanding and satisfying of expressed customer needs; whereas proactiveness is discovering, understanding and satisfying latent customer needs. Being proactive is not only reacting to change when it happens, but in taking action by causing change toward a state (Dencker et al., 2009). Thus, proactive activity support refers to the firm's commitment in promoting corporate mindsets that emphasize opportunity-seeking, has perspective foresight, and first-moving initiative to aggressively enhance competitive positioning, and the capability of the firm (Bhatnagar & Viswanathan, 2000; Dencker et al., 2009). As, previous literature has shown that proactive activity increases customer loyalty, market share (Deepen et al., 2008), stakeholder relationships (Li & Barnes,



2008), competitive positioning (Bhatnagar & Viswanathan, 2000), and business performance (Bodlaj, 2010), therefore the hypothesis is assigned as follows:

*H2: Proactive activity support is positively related to, a) new product establishment, b) business operation excellence, c) stakeholder involvement exaltation, and d) firm sustainability.*

### **2.1.3. Market-driving encouragement**

Prior literature illustrated that market-driving has been proposed as a key to firm success in creating new market opportunities (Hills & Sarin 2003). Market-driving organizations aim to achieve greater performance, reshaping the structure of the market and exploiting the competitors' weaknesses in order to become the market leader. By the assumption that customers do not know their own preferences, marketers can act to develop and form them (Gebhardt, Carpenter & Sherry, 2006). Market-driving encouragement is a market leader's perspective in supporting business activities that can create, shape, and accelerates potential markets to exploit opportunities which competitors cannot (Kumar, Scheer & Kotler, 2000). Therefore, the hypothesis is given as follows:

*H3: Market-driving encouragement is positively related to, a) new product establishment, b) business operation excellence, c) stakeholder involvement exaltation, and d) firm sustainability.*

### **2.1.4. Risk-taking circumstance acceptance**

The relationship between risk-taking and innovation performance is particularly fruitful. Taking risks in organizations is important in explaining innovation performance (Garcia-Granero et al., 2014). Several streams of research propose that risk-taking propensity can make a difference in defining the ability of firms to innovate. Therefore, firms with more propensities and capability to take more tolerance and acceptance toward risks are more likely to perform better.

Risk-taking circumstance acceptance in this study is defined as the firm capability and attitude toward engaging in uncertain situations, and admitting to the results and consequences without regret (Gibb, 2010). It is involved in opportunity-seeking, decision-making (Busenitz, 1999), and the overall propensity to continually enter into risk-taking situations (Gibb, 2010). Thus, the hypothesis is elaborated as follows:

*H4: Risk-taking circumstance acceptance is positively related to, a) new product establishment, b) business operation excellence, c) stakeholder involvement exaltation, and d) firm sustainability.*

### **2.1.5. Dynamic adaptation commitment**

The concept of dynamic adaptation encompasses the routines of resource exploitation and deployment, which are supported by acquisition, internalization and dissemination of extant knowledge; as well as resource reconfiguration, divestment and integration (Dixon, Meyer, & Day, 2014). This specific capability enables firms to adjust and respond successfully to environmental change (Lee, 2001). Therefore, dynamic adaptation commitment refers to organizational orientation in the continuous process of adjustment to environmental change and uncertainty, and of maintaining an effective alignment with the environment (Firth, 2010).

Previous literature shows that there is a theoretical link among dynamic adaptation, innovation, business competitiveness (Tuominen, Rajala & Moller, 2004), and firm performance (Jundt, 2008).

*H5: Dynamic adaptation commitment is positively related to a) new product establishment, b) business operation excellence, c) stakeholder involvement exaltation, and d) firm sustainability.*

## 2.2. The relationships among the consequences of strategic innovation capability

This section examines the relationships among the consequences of strategic innovation capability consisting of new product establishment, business operational excellence, stakeholder involvement exaltation and firm sustainability. The critical literature review on the definition of each construct and proposed hypothesis are discussed below.

### 2.2.1. New product establishment

New product development (NPD) refers to the process of thinking of, and creating a new product/service and outcomes for achieving a corporate goal (Nakata & Sivakumar, 1996). Continuously, introducing new products into the market has become a key factor for a company to succeed in the market (Tsai & Chuang, 2006). However, many new products failed, and instead, generated significant financial and strategic losses to the firms. Therefore, the concept of new product establishment in this study refers to the firm's ability to successfully develop and launch its new product/service to the market with significant financial outcomes and strategic advantage for those firms (Nakata & Sivakumar, 1996; Ledwith & O'Dwyer, 2009). As a consequence, the hypothesis is set out as follows:

*H6: New product establishment is positively related to, a) stakeholder involvement exaltation and b) firm sustainability.*

### 2.2.2. Business operation excellence

The term "operational excellence" is referred to the ability of an organization to attain its absolute level of operational goals and objectives of activities (Kumar & Gulati, 2010). Excellence in organizational operations has resulted in cost reduction (Rabinovich, Dresner & Evers, 2003), organizational objectives, goal achievement (Gordon, Loeb & Tseng, 2009), and business survival (Kumar & Gulati, 2010). Moreover, business operational excellence, in this study, is defined as the supreme ability of the firm in operating its production process to achieve its operational goals and competitive advantage (Kumar & Gulati, 2010). Therefore, the hypothesis is given as below:

*H7: Business operation excellence is positively related to, a) stakeholder involvement exaltation and b) firm sustainability.*

### 2.2.3. Stakeholder involvement exaltation

The stakeholder is any group or individual that can affect or be affected by the activity of an organization engaging in accomplishing its mission and goals (Freeman, 1984). The prior literature suggested that stakeholder positively influences the firm image and reputation, business decision quality, efficiency (Clercq, Dimov & Thongpanl, 2010), organizational success (Todt, 2011), and corporate sustainability (Jonge, 2006). While stakeholder involvement refers to business vision that emphasizes and focuses on the enhancement of its stakeholder participation, collaboration and relationship (Prunell, 2012), therefore stakeholder involvement exaltation is defined as the escalation in corporate collaborations, participation and relationships with any group or individual that can affect or be affected by the activity for which an organization is engaging to accomplish its missions and goals (Freeman, 1984; Myllykangas, Kujala & Lehtimäki, 2010). Hence, the hypothesis is assigned as below:

*H8: Stakeholder involvement exaltation is positively related to firm sustainability.*

### 2.2.4. Firm sustainability

Firm sustainability refers to the firm's ability to meet and satisfy the direct and indirect stakeholder demands, without compromising its ability to meet the need of future stakeholders (Dyllick & Hockerts, 2002). It involves sustaining and expanding economic growth, shareholder

value, prestige, reputation, customer relationships, and the quality of products and services (Szekely & Knirsch, 2005). Therefore, with respect to the literature reviews, this study defines firm sustainability as the continuous increase and maintainability of business income, profitability, product and service quality, market share, business growth, and reputation over competitors (Dyllick & Hockerts, 2002; Szekely & Knirsch, 2005).

### 2.3. The relationships among strategic innovation capability and its antecedents

This section describes the relationships among strategic innovation capability and its antecedents, including modern transformational leadership, organizational creativity orientation, business learning competency, firm resource availability and complementary technology growth. The extensive literature review on the definition of each construct and purposed hypothesis are discussed below.

#### 2.3.1. Modern transformational leadership

Leadership style is one of the most important individual influences on corporate innovation. Transformational leadership constitutes a set of behaviors that motivate followers to achieve performance beyond expectations by changing followers' attitudes, beliefs, and values (Bass, 1985; Yukl, 1999). It can enhance positive business proactive activities (Testa & Sipe 2012), and corporate sustainability (Shin & Zhou, 2003). Likewise, a modern leadership role is also directed to followers and their interests in many cases (Daft, 2008). Thus, in this study, modern transformational leadership refers to a proactive managerial ability in motivating organizational employees to achieve performance beyond expectation by compromising with and utilizing the interests of owners and followers (Bass, 1985; Daft, 2008). Therefore, the hypothesis is proposed as below:

*H9: Modern transformational leadership is positively related to, a) new idea enhancement, b) proactive activity support, c) market-driving encouragement, d) risk-taking circumstance acceptance and e) dynamic adaptation commitment.*

#### 2.3.2. Organizational creativity orientation

In this study, organizational creativity orientation refers to the organizational vision that emphasizes the generation of new products, services, ideas, processes and procedures to gain continuous improvement and competitive advantage (Liu, Bai & Zhang, 2011). It could enhance the firm's ability to create or develop new methods of knowledge management and service innovation superior to their competitors (Isaksen & Ekvall, 2010). Hence, the hypotheses are proposed as below:

*H10: Organizational creativity orientation is positively related to, a) new idea enhancement, b) proactive activity support, c) market-driving encouragement, d) risk-taking circumstance acceptance and e) dynamic adaptation commitment.*

#### 2.3.3. Business learning competency

Originally, learning is defined as the process of improving actions through better knowledge and understanding (Fiol & Lyles, 1985). It is a dynamic process facilitating performance and innovation. It is focusing on the development of knowledge and a knowledge base of the organization to support the development of organizational efficiency (Madsen & Desai, 2010). In addition, competence is an ability to sustain and to coordinate the deployment of resources in ways that promise to help the organization achieve its goal (Sanchez, 1995). Hence, business learning competency refers to firm proficiency in acquiring, assimilating, transforming and exploiting existing knowledge to generate new knowledge in a dynamic business environment (Camison & Fores, 2011).

Previous researchers found that organizational learning plays a significant role in improving firm performance (Camison & Fores, 2011) and firm innovations are likely to happen when the firm has the ability of learning through new knowledge which is developed, transferred, and utilized (Alegre & Chiva, 2008). Therefore, the hypotheses are proposed below:

*H11: Business learning competency is positively related to, a) new idea enhancement, b) proactive activity support, c) market-driving encouragement, d) risk-taking circumstance acceptance and e) dynamic adaptation commitment.*

#### **2.3.4. Firm Resource Availability**

In this study, firm resource availability refers to the fruitfulness of firm-specific assets, including both tangible and intangible, for accommodating the core business processes to be achieved (Pansuppawatt & Ussawanitchakit, 2011). The absence of given resources could limit the growth of that firm while the presence of given resources could promote growth in such firms (Bruton & Rubanik, 2002). The sufficient levels of time, workforce, and other required specific resources are needed for businesses. Therefore, resource availability can be viewed as a green or red light indicator that represents the tendency of a firm's success toward desirable production (Contino, 2005). Therefore, the hypotheses are proposed as follows:

*H12: Firm resource availability is positively related to a) new idea enhancement, b) proactive activity support, c) market-driving encouragement, d) risk-taking circumstance acceptance and e) dynamic adaptation commitment.*

#### **2.3.5. Complementary technology growth**

Technology is one of the key forces in achieving business goals. The generation of technology growth can, overall, enhance the efficiency of production functions (Schoute, 2011), and offer new benefits and values to customers (Prasnikar, et al., 2008). Since complementary resources is defined as unique resources that jointly result in superior financial outcomes more than the sum of those acquired from individual endowments (Gulati, Nohria & Zaheer, 2000), then complementary technology growth is defined as the progress and forward change of technology that jointly create superior results and outcomes (Mirbagheri & Hejazinia, 2010). Hence, the hypotheses are proposed as follows:

*H13: Complementary technology growth is positively related to a) new idea enhancement, b) proactive activity support, c) market-driving encouragement, d) risk-taking circumstance acceptance and e) dynamic adaptation commitment.*

### **3. Research methods**

#### **3.1. Sample selection and data collection procedure**

The Thai auto parts industry is selected as the population of this study. In order to illustrate the research phenomenon, a list of 582 Thai auto parts firms in Thailand were provided by the Thai Auto Parts Manufacturers Association ([www.thaiautoparts.or.th/](http://www.thaiautoparts.or.th/), accessed January 15, 2015). This chosen industry represents a highly competitive and innovative business environment. Especially, the Thai auto parts businesses have played a significant role in helping to increase and expand the Thai economy in terms of economic growth and stability (Sriboonlue & Ussahawanitchakit, 2014). The supports from government in the first-car policy raise both customer demand and competitive intensity in the auto parts industry. Meanwhile, in the Thai coup d'état of 2014, the Thai auto parts industry faced an economic downturn which directly affected the market and customer demand. Moreover, with regard to globalization, the auto parts businesses in Thailand face the challenge of competition among numerous competitors, both local and international.

A mail survey procedure via the constructive questionnaire was employed for data collection. The participants in this study were managing directors and managing partners. With regard to the questionnaire mailing, only 18 surveys were undeliverable because some were no longer in business or had moved to an unknown location. Deducting the undeliverable from the original 582 mailed, the valid mailing was 564 surveys. The follow-up electronic mails of non-responses were conducted after three weeks. Finally, 159 responses were collected. However, only 126 complete questionnaires were usable. The effective response rate was approximately 22.34%. Moreover, the comparison between early and late respondents implied that a non-response bias was not a problem in this study.

### 3.2. Variables

#### 3.2.1. Dependent variable

Firm sustainability is measured by a five-item scale. It illustrates business outcomes in the form of income, profitability, product and service quality, market share, business growth, and reputation over competitors in the long-run.

#### 3.2.2. Independent variables

Strategic innovation capability is the main variable in this study which is classified into five distinctive dimensions: new idea enhancement, proactive activity support, market-driving encouragement, risk-taking circumstance acceptance, dynamic adaptation commitment.

New idea enhancement is measured by a four-item scale based on its definition that covers the process of generation, creation, selection, implementation and promotion of novel business ideas through new business ideas of products and services, new ideas of administration, new ideas of technology, and the new idea of the potential market.

Proactive activity support is the intention of a firm's behaviors that promote opportunity-seeking, foresight perspective, and forecasted future customer expectation to achieve the first-moving initiative. This variable was measured by a five-item scale.

Market-driving encouragement is defined as "realized behaviors of a firm that are focused on changing the structure, behavior and/or beliefs of four market entities – customers, competitors, channels and regulators – in order to gain advantage" (Hills, Sarin & Kohil, 2006: p.10). Five items were used to measure this variable.

Risk-taking circumstance acceptance is referred to as the reflection and thought about corporate risk-taking styles, beliefs and capability, to evaluate the firm's risk-taking circumstance acceptance construct. Therefore, this variable is assessed using four items revised from Gene Calvert's Risk Attitudes Inventory (Calvert, 1993).

Dynamic adaptation commitment is assessed by an organization's perception toward norms and obligations in the continuous reclamation to change and uncertainty. There are four items employed to estimate this dimension.

#### 3.2.3. Mediating variables

New product establishment is the firm ability to successfully develop and launch its new product/service to the market with significant financial outcomes and strategic advantage for the firms (Ledwith & O'Dwyer, 2009). This mediator was measured by a four-item scale.

Business operation excellence is the business perception toward their ability in organizing and managing business operations compared to competitors. It consists of five items used to measure this variable.

Stakeholder involvement exaltation is the escalation in corporate collaborations, participation and relationships with any group or individual that can affect or be affected by the



activity for which an organization is engaged to accomplish its missions and goals. A four-item scale was used to assess this variable.

### 3.2.4. Antecedent variable

Modern transformational leadership is the managerial perception and awareness in creating job motivation, and stimulating their employees' involvement and creativity (Rui, Emerson & Luis, 2010). This antecedent was measured by a four-item scale.

Organization creativity orientation is the intentional creation, introduction and application of new ideas within a work role, group or organization, in order to benefit the organization. This variable is assessed using four items revised from Janssen's (2000) idea generation scale. Business learning competency refers to business proficiency in acquiring, assimilating, transforming, and exploiting existing knowledge to generate new knowledge in a dynamic business environment (Eisenhardt & Martin, 2000). It consists of four items used to measure this variable. Firm resource availability is the levels of sufficient and available resources supporting strategy implementation, and the effective and efficient application of resources for the performer. The measurement scale of this variable includes four items.

Complementary technology growth is referred to the managerial perception toward the change of technology within an industry that facilitates business operations and processes. A four-item scale was used to assess this variable.

### 3.2.5. Control variables

Two control variables; firm age and firm size, that may influence the hypothesized relationships, are included. Previous research suggested that larger and older firms may face organizational inertia, while smaller and younger firms are more likely to encounter resource constraints (Patel, Terjesen & Li, 2012).

## 3.3. Reliability and validity

To assess the measurement reliability and validity, factor analysis was firstly utilized during the pre-test. The confirmatory factor analyses were conducted separately on each set of the items representing a particular scale due to limited observations. All factor loadings are greater than the 0.40 cut-off (Nunnally & Bernstein, 1994) and are statistically significant. In the scale reliability, Cronbach's alpha coefficients are greater than 0.70 (Nunnally & Bernstein, 1994). Thus, the scales of all measures appear to produce internally consistent results. Table 1 below presents the results for both factor loadings and Cronbach's alpha for multiple-item scales used in this study.

Items	Factor Loading	Cronbach's Alpha
New Idea Enhancement (NIE)	.790 - .934	.905
Proactive Activity Support (POS)	.679 - .897	.874
Market-Driving Encouragement (MDE)	.867 - .895	.917
Risk-Taking Circumstance Acceptance (RCA)	.839 - .871	.864
Dynamic Adaptation Commitment (DAC)	.803 - .913	.777
New Product Establishment (NPE)	.838 - .934	.913
Business Operation Excellence (BOE)	.742 - .898	.883
Stakeholder Involvement Exaltation (SIE)	.714 - .885	.833
Firm Sustainability (FSU)	.746 - .905	.889
Modern Transformational Leadership (MTL)	.799 - .867	.895
Organizational Creation Orientation (OCO)	.689 - .871	.813
Business Learning Competency (BLC)	.810 - .891	.859
Firm Resource Availability (FRA)	.738 - .814	.797
Complementary Technology Growth (CTG)	.709 - .852	.804

<sup>a</sup> n = 30

**Table 1: Result of Measure Validation in Pre-Test<sup>a</sup>**

## 3.4. Statistical Techniques

Hierarchical regression analysis is used to test and examine the relationships among the dimensions of strategic innovation capability, its antecedents and consequences. With the need

to understand the relationships in this study, eleven statistical equations of the aforementioned relationships are depicted as shown below.

$$\text{Equation 1: } NPE = \alpha_{01} + \beta_{01}NIE + \beta_{02}PAS + \beta_{03}MDE + \beta_{04}RCA + \beta_{05}DAC + \beta_{06}FA + \beta_{07}FS + \varepsilon_{01}$$

$$\text{Equation 2: } BOE = \alpha_{02} + \beta_{08}NIE + \beta_{09}PAS + \beta_{10}MDE + \beta_{11}RCA + \beta_{12}DAC + \beta_{13}FA + \beta_{14}FS + \varepsilon_{02}$$

$$\text{Equation 3: } SIE = \alpha_{03} + \beta_{15}NIE + \beta_{16}PAS + \beta_{17}MDE + \beta_{18}RCA + \beta_{19}DAC + \beta_{20}FA + \beta_{21}FS + \varepsilon_{03}$$

$$\text{Equation 4: } FSU = \alpha_{04} + \beta_{22}NIE + \beta_{23}PAS + \beta_{24}MDE + \beta_{25}RCA + \beta_{26}DAC + \beta_{27}FA + \beta_{28}FS + \varepsilon_{04}$$

$$\text{Equation 5: } SIE = \alpha_{05} + \beta_{29}NPE + \beta_{30}BOE + \beta_{31}FA + \beta_{32}FS + \varepsilon_{05}$$

$$\text{Equation 6: } FSU = \alpha_{06} + \beta_{33}NPE + \beta_{34}BOE + \beta_{35}SIE + \beta_{36}FA + \beta_{37}FS + \varepsilon_{06}$$

$$\text{Equation 7: } NIE = \alpha_{07} + \beta_{38}MTL + \beta_{39}OCO + \beta_{40}BLC + \beta_{41}FRA + \beta_{42}CTG + \beta_{43}FA + \beta_{44}FS + \varepsilon_{07}$$

$$\text{Equation 8: } PAS = \alpha_{08} + \beta_{45}MTL + \beta_{46}OCO + \beta_{47}BLC + \beta_{48}FRA + \beta_{49}CTG + \beta_{50}FA + \beta_{51}FS + \varepsilon_{08}$$

$$\text{Equation 9: } MDE = \alpha_{09} + \beta_{52}MTL + \beta_{53}OCO + \beta_{54}BLC + \beta_{55}FRA + \beta_{56}CTG + \beta_{57}FA + \beta_{58}FS + \varepsilon_{09}$$

$$\text{Equation 10: } RCA = \alpha_{10} + \beta_{59}MTL + \beta_{60}OCO + \beta_{61}BLC + \beta_{62}FRA + \beta_{63}CTG + \beta_{64}FA + \beta_{65}FS + \varepsilon_{10}$$

$$\text{Equation 11: } DAC = \alpha_{11} + \beta_{66}MTL + \beta_{67}OCO + \beta_{68}BLC + \beta_{69}FRA + \beta_{70}CTG + \beta_{71}FA + \beta_{72}FS + \varepsilon_{11}$$

## 4. Results and discussion

### 4.1. The relationships among strategic innovation capability and its consequences

Table 2 represents the descriptive statistics and correlation matrix of all variables. With respect to the potential problem relating to multicollinearity, none of the correlation coefficients exceed 0.80. Moreover, the variance inflation factors (VIF) in equation 1-11 (table 3 and table 4) ranged from 1.271 to 2.012, which were below the cut-off value of 10 (Hair, et al., 2006). Hence, it can be concluded that multicollinearity is not a serious problem in this study.

Table 3 represents the results of hierarchical regression analysis of the relationships among strategic innovation capability dimensions and its consequences. Models 1 to 6 illustrate that strategic innovation capability dimensions, namely, new idea enhancement, has significant positive effects on new product establishment ( $\beta_{01}=0.239$ ,  $p<0.05$ ), business operation excellence ( $\beta_{08}=0.297$ ,  $p<0.01$ ), stakeholder involvement exaltation ( $\beta_{15}=0.237$ ,  $p<0.01$ ), and firm sustainability ( $\beta_{22}=0.368$ ,  $p<0.01$ ). The finding is consistent with the idea that new idea enhancement is an important source for innovation creation (Newell, Swan & Robertson, 1998). Generating new ideas is a significant factor for increasing companies' revenue growth (McAdam & McClelland, 2002) business effectiveness and organizational sustainment (Foo, Wong & Ong, 2005). **Therefore, hypothesis 1 is fully supported.**

	NIE	PAS	MDE	RCA	DAC	NPE	BOE	SIE	FSU	MTL	OCO	BLC	FRA	CTG
Mean	4.132	3.988	4.081	3.873	4.161	4.119	3.974	4.116	4.128	4.171	4.018	4.178	4.103	4.163
S.D.	.534	.527	.528	.701	.574	.591	.679	.522	.583	.517	.582	.547	.561	.544
PAS	.592***													
MDE	.413**	.778***												
RCA	.408***	.684***	.587***											
DAC	.559***	.421***	.392***	.378***										
NPE	.525***	.469***	.592***	.422***	.337***									
BOE	.378***	.408***	.279***	.335***	.496***	.414***								
SIE	.472***	.391***	.579***	.621***	.583***	.552***	.520***							
FSU	.643***	.541***	.543***	.429***	.611***	.576***	.201**	.635***						
MLT	.672***	.739***	.683***	.421***	.696***	.432***	.437***	.458***	.480***					
OCO	.741***	.594***	.579***	.411***	.474***	.563***	.499***	.429***	.411***	.644***				
BLC	.453***	.431***	.489***	.463***	.639***	.496***	.597***	.392***	.439***	.564***	.486***			
FRA	.447***	.595***	.639***	.758***	.583***	.318***	.682***	.451***	.502***	.478***	.572***	.732***		
CTG	.482***	.514***	.543***	.535***	.457***	.233**	.519***	.342***	.390***	.559***	.395***	.641***	.303***	
FA	-.079	.091	.118	.087	.075	.503	.124	.128	.085	.090	.082	.112	.088	.099
FS	-.045	.067	.121	.093	.034	.108	.102	.185**	.094	.084	.101	.089	.054	.078

\*\*\* $p<0.01$ , \*\* $p<0.05$

Table 2: Descriptive Statistics and Correlation Matrix

In hypothesis 2a-e, the analysis revealed that business proactive activity support has significant positive relationships with new product establishment ( $\beta_{02}=0.198$ ,  $p<0.05$ ), business operation excellence ( $\beta_{09}=0.228$ ,  $p<0.05$ ), stakeholder involvement exaltation ( $\beta_{16}=0.246$ ,  $p<0.01$ ),

and firm sustainability ( $\beta_{23}=0.288$ ,  $p<0.01$ ). Proactive business activities could increase customer loyalty, market share (Deepen et al., 2008), stakeholder relationships (Li & Barnes, 2008), innovation capability, and business performance (Bodlaj, 2010). **Hence, hypothesis 2 is fully supported.**

In line with hypotheses 3, the results show that a firm's market-driving encouragement has significant positive effects with new product establishment ( $\beta_{03}=0.306$ ,  $p<0.01$ ) stakeholder involvement exaltation ( $\beta_{17}=0.275$ ,  $p<0.01$ ), and firm sustainability ( $\beta_{24}=0.393$ ,  $p<0.01$ ); hypotheses 3a, 3c and 3d. These flavors the market-driving literature related to a wide variety of innovative possibilities (Sebastiao, 2007). **Thus, hypothesis 3 is partially supported.**

Independent Variables	Dependent Variables					
	NPE	BOE	SIE	FS	SIE	FS
	H1-5a	H1-5b	H1-5c	H1-5d	H6-7a	H6-7b, 8
	Equation 1	Equation 2	Equation 3	Equation 4	Equation 5	Equation 6
New Idea Enhancement (NIE)	.239** (.085)	.297*** (.094)	.237*** (.076)	.368*** (.095)		
Proactive Activity Support (PAS)	.198** (.076)	.228** (.082)	.246*** (.082)	.288*** (.088)		
Market-Driving Encouragement (MDE)	.306*** (.079)	.109 (.097)	.275*** (.078)	.393*** (.098)		
Risk-Taking Circumstance Acceptance (RCA)	.100 (.082)	.107 (.086)	.081 (.069)	.192** (.071)		
Dynamic Adaptation Commitment (DAC)	.233** (.080)	.314*** (.080)	.224** (.077)	.266*** (.082)		
New Product Establishment (NPE)					.375*** (.091)	.311*** (.086)
Business Operation Excellence (BOE)					.360*** (.093)	.107 (.095)
Stakeholder Involvement Exaltation (SIE)						.425*** (.094)
Firm age (FA)	.112 (.127)	.131 (.148)	.109 (.121)	.066 (.137)	.124 (.109)	.118 (.125)
Firm size (FS)	.097 (.102)	.076 (.128)	.094 (.104)	.098 (.118)	.126 (.099)	.090 (.095)
Adjusted R <sup>2</sup>	.489	.491	.512	.412	.351	.427
Maximum VIF	1.954	1.954	1.954	1.954	1.271	1.390

Beta coefficients with standard errors in parenthesis, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$

Table 3: Result of Regression Analysis of Strategic Innovation Capability and Its Consequences

Next, the finding exhibited that business risk-taking circumstance acceptance has a significant positive relationships with firm sustainability ( $\beta_{24}=0.192$ ,  $p<0.05$ ); hypothesis 4d. This coincides with the business perspective that there are positive relationships among managers' risk-taking, innovation (Garcia-Granero et al., 2014), competitiveness (Gibb, 2010), and heightened performance (Madsen, 2007). **Therefore, hypothesis 4 is partially supported.**

Dynamic adaptation capability, the last dimension of strategic innovation capability, also illustrated significant positive relationships with new product establishment ( $\beta_{05}=0.233$ ,  $p<0.05$ ), business operation excellence ( $\beta_{12}=0.314$ ,  $p<0.01$ ), stakeholder involvement exaltation ( $\beta_{18}=0.224$ ,  $p<0.05$ ), and firm sustainability ( $\beta_{25}=0.266$ ,  $p<0.01$ ). This is consistent with the view that dynamic adaptation capability associates with stakeholder relationship quality (Woo & Ennew, 2004), innovation performance (Grant, 2005), and business long-term relationships (Holm & Eriksson, 2000). **For this reason, hypothesis 5 is fully supported.**

In hypothesis 6, the regression analysis illustrated that new product establishment has significant positive relationships with stakeholder involvement exaltation ( $\beta_{29}=0.375$ ,  $p<0.01$ ), and firm sustainability ( $\beta_{33}=0.311$ ,  $p<0.01$ ). It confirms the idea that new product establishment is related to business competency, strategic choice (Howell, Shea & Higgings, 2005), marketing position advantage and business performance (Ledwith & O'Dwyer, 2009). **Therefore, hypothesis 6 is fully supported.**

The regression result of business operation excellence in hypothesis 7 revealed that while there is a significant positive relationship with stakeholder involvement exaltation ( $\beta_{30}=0.375$   $p<0.01$ ), there was no significant positive impact on firm sustainability ( $\beta_{34}=0.107$   $p>0.10$ ). This ensures the perception that business operation excellence is an adherent to stakeholder satisfaction (Bandyopadhyay, 2011). However, the insignificant result of the relationship between business operation excellence and firm sustainability highlight the important role of stakeholder involvement exaltation as a mediator. **In sum, hypothesis 7 is partially supported.**

Finally, stakeholder involvement exaltation illustrates a significant positive relationship with firm sustainability ( $\beta_{35}=0.425$   $p<0.01$ ). The result assures that stakeholder involvement positively influences organizational success (Todt, 2011), and corporate sustainability (Jonge, 2006). **Therefore, hypothesis 8 is fully supported.**

#### 4.2. The relationships among strategic innovation capability and its antecedents

Firstly, the regression analysis in table 4 illustrates the relationships among strategic innovation capability's dimensions and its antecedents. Models 7 to 11 illustrate that strategic innovation capability's antecedent, namely, modern transformation leadership, has significant positive effects with new idea enhancement ( $\beta_{38}=0.341$ ,  $p<0.01$ ), proactive activity support ( $\beta_{45}=0.421$ ,  $p<0.01$ ), market-driving encouragement ( $\beta_{52}=0.316$ ,  $p<0.01$ ), and dynamic adaptability commitment ( $\beta_{66}=0.376$ ,  $p<0.01$ ), hypotheses 9a, 9b 9c, and 9e. The finding is consistent with the view that modern transformational leadership is associated with organizational proactiveness activities and organizational innovation (Testa & Sipe 2012). **Therefore, hypothesis 9 is partially supported.**

Secondly, the regression analysis of organizational creativity orientation revealed significant positive relationships with all of strategic innovation capability's dimensions: new idea enhancement ( $\beta_{39}=0.371$ ,  $p<0.01$ ), proactive activity support ( $\beta_{46}=0.328$ ,  $p<0.01$ ), market-driving encouragement ( $\beta_{53}=0.284$ ,  $p<0.01$ ), and dynamic adaptability commitment ( $\beta_{67}=0.231$ ,  $p<0.05$ ); hypotheses 10a, 10b 10c, and 10e. This is aligned with the concept that organizational creativity orientation is collaborated with superior innovation performance (Rasulzada & Dackert, 2009). **Hence, hypothesis 10 is partially supported.**

Independent Variables	Dependent Variables				
	NIE	PAS	MDE	RCA	DAC
	H9-13a Equation 7	H9-13b Equation 8	H9-13c Equation 9	H9-13d Equation 10	H9-13e Equation 11
Modern Transformational Leadership (MITL)	.341*** (.087)	.421*** (.091)	.316*** (.089)	.078 (.077)	.376*** (.095)
Organizational Creativity Orientation (OCO)	.371*** (.099)	.328*** (.086)	.284*** (.083)	.083 (.074)	.231** (.078)
Business Learning Competency (BLC)	.273*** (.080)	.210** (.078)	.228** (.077)	.097 (.080)	.321*** (.091)
Firm Resource Availability (FRA)	.218** (.076)	.277*** (.088)	.273*** (.088)	.371*** (.089)	.278*** (.089)
Complementary Technology Growth (CTG)	.241** (.082)	.245** (.082)	.210** (.078)	.342*** (.086)	.205** (.075)
Firm age (FA)	.108 (.099)	.079 (.101)	.103 (.091)	.076 (.095)	.099 (.104)
Firm size (FS)	.094 (.083)	.086 (.092)	.098 (.082)	.069 (.088)	.84 (.096)
Adjusted R <sup>2</sup>	.574	.458	.495	.431	.447
Maximum VIF	2.012	2.012	2.012	2.012	2.012

Beta coefficients with standard errors in parenthesis, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$

Table 4: Result of Regression Analysis of Strategic Innovation Capability and Its Antecedents

Thirdly, hypothesis 11 shows that business learning competency has positive significant relationships with new idea enhancement ( $\beta_{40}=0.273$ ,  $p<0.01$ ), proactive activity support ( $\beta_{47}=0.210$ ,  $p<0.05$ ), market-driving encouragement ( $\beta_{54}=0.228$ ,  $p<0.05$ ), and dynamic



adaptability commitment ( $\beta_{67}=0.321$ ,  $p<0.01$ ); hypotheses 11a, 11b 11c, and 11e. The result is similar to the thought that business learning competency participates with innovation (Alegre & Chiva, 2008), goal achievement (Sanchez, 1995), business risk reduction (Calantone, Cavusgil & Zhao, 2002), superior business performance (Camison & Fores, 2011), long-term growth and survival (Wu & Cavusgil, 2006). **Thus, hypothesis 11 is partially supported.**

Fourth, firm resource availability presents a positive significant relationship with new idea enhancement ( $\beta_{41}=0.218$ ,  $p<0.05$ ), proactive activity support ( $\beta_{48}=0.277$ ,  $p<0.01$ ), market-driving encouragement ( $\beta_{55}=0.273$ ,  $p<0.01$ ), risk-taking circumstance acceptance ( $\beta_{62}=0.371$ ,  $p<0.01$ ), and dynamic adaptability commitment ( $\beta_{68}=0.278$ ,  $p<0.01$ ). This finding facilitates the notion that firm resource availability is associated with innovation outcome and technology capability (Son & Han, 2011). **Consequently, hypothesis 12 is fully supported.**

Lastly, the result in table 4 also illustrates the positive significant relationships among industry complementary technology growth and strategic innovation capability's dimensions: new idea enhancement ( $\beta_{42}=0.241$ ,  $p<0.05$ ), proactive activity support ( $\beta_{49}=0.245$ ,  $p<0.05$ ), market-driving encouragement ( $\beta_{56}=0.210$ ,  $p<0.05$ ), risk-taking circumstance acceptance ( $\beta_{63}=0.342$ ,  $p<0.01$ ), and dynamic adaptability commitment ( $\beta_{69}=0.205$ ,  $p<0.01$ ). This result confirms the view that complementary technology growth is related to innovation success, innovative opportunities (King, Covin & Hegarty, 2003), business growth, and sustainable competitive advantages (Harrison et al., 2001). **Therefore, hypothesis 13 is fully supported.**

In summary, the result in table 3-4 illustrates the consistent result of the significant positive relationship of the firm's strategic innovation capability, its purposed consequences, and antecedents. It highlights the importance of strategic innovation capability as one of effective business tools to achieve sustainability in a rapidly changing environment. However the insignificant relationship between business operation excellence and firm sustainability (Hypothesis 7b) has shed light on the mediating role of stakeholder involvement exaltation. Moreover, this study also highlights five substantial antecedents of strategic innovation capability.

## 5. Contributions

This study aims to offer some theoretical contributions as well as managerial implications. The core theoretical contribution relates to conceptualizing the comprehensive view of strategic innovation capability as a multidimensional construct, which are newly developed constructs and dimensions, differentiating from prior strategic management and innovation capability literature. This empirical study sensitizes and explains theories associated with how a business firm achieves and fulfills its goals and, at the same time, maintains its sustained competitive advantage and superior performance in a radical business environment. It clarifies the nature of strategic innovation capability for future investigation.

This study also attempts to incorporate several theories to propose logical links in a conceptual model, including the dynamic capability theory and contingency theory. Relying on these theories, businesses survivability and successes are subjected to business capability in generating novel innovations for industry. Vice versa, this study demonstrated that strategic innovation capability is required to enhance business performance and sustainability. It also provides a crystal-clear understanding of the relationships among five dimensions of strategic innovation capability and firm sustainability through new product establishment, business operation excellence, and stakeholder involvement exaltation. Moreover, the primal mediating role of stakeholder involvement exaltation has been highlighted.

Furthermore, the discussions of this study also contribute to managerial practices concentrating on strategic innovation capability implementation and the usefulness of strategic



innovation capability that stimulate and enhance the success and sustainability of innovative and high-tech businesses. It highlights the importance of business's strategic innovation capability that accommodates and facilitates managerial executive decision-making and resource allocation strategy. Managerial executives must be aware and realize that strategic innovation capability allows the business sector to attain long-lasting profitability and competitiveness. Moreover, organizational creativity, business learning competency, firm resource availability, technology and leadership are mandatory factors in promoting strategic innovation capability.

## 6. Conclusion

This study aims to investigate the consequences and antecedents of strategic innovation capability in the Thai auto parts industry. Auto parts businesses in Thailand are faced with a highly competitive business environment. Customers are always demanding new innovative products at a lower cost. In trying to respond, businesses need to develop and improve their strategic innovation capability to establish substantial organizational innovative outcomes and sustain their business success. Therefore, to clearly understand the relationships among strategic innovation capability, its antecedents and consequences; the dynamic capability and contingency theory elaborated to explain the aforementioned relationships.

This study illustrates the influence of strategic innovation capability on business sustainability and, at the same time, exploring the antecedents of strategic innovation capability. The data from 126 participants from auto parts businesses in Thailand highlight that strategic innovation capability dimensions are positively related to business sustainability. In more detail, the results reveal that new idea enhancement, proactivity support, and dynamic adaptation commitment (dimensions 1, 2, and 3 successively) are essential determinants to yield superior new product establishment, business operation excellence, stakeholder involvement exaltation, and firm sustainability. Interestingly, the firm's risk-taking capability on the outcomes is only meaningful to firm sustainably. On the other hand, market-driving encouragement has no relativity with business operations. Business operation excellence shows no significant result on firm sustainability while other does. However, the relationships of excellent business operations yielded non-significant relationships. This implied that stakeholder involvement exaltation may play a mediator role on the aforementioned relationship.

For the antecedents, firm resource availability and complementary technology growth are the top two most influential determinant of strategic innovation capability. Modern transformational leadership, organizational creativity orientation, and business learning competency failed to promote business risk-taking circumstance acceptance.

In summary, strategic innovation capability definitely benefits business success and sustainability. Therefore, in order to gain the generalizability and reliability of the result, future research direction may shed more light on employing alternative research methods, garnering research samples from other industries to compare the results, and examining potential moderators of strategic innovation capability relationships.

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## Dimensions of point of purchase factors in impulsive buying of women's skincare cosmetics in India

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### Keywords

Impulsive buying behavior, point of purchase factors, brick and mortar stores, skin care products, positive reinforcers

### Abstract

*Impulsive buying is a much talked and researched subject particularly in view of the immense business that it generates all over the world. The point of purchase factors in brick and mortar stores play a crucial role in determining the buying behavior. Impulsive buying behavior, on one hand is difficult to predict or estimate, on the other hand much talked and extremely crucial area in consumer behavior. Women associate themselves very innately with skin care products for many different aspects like looks, aging, sun protection, moisturizing. As a matter of fact the skincare products become an extension of their very own personalities. In the present research paper an attempt is made to understand the importance of various factors present at the point of purchase and the degree to which they act as positive reinforcers in impulsive buying of skin care items. Twenty two constructs had been identified based on extensive literature review. These were later grouped into eight factors using factor analysis. These factors are in store promotions, merchandising, ambience, atmospherics, support at point of purchase, display, convenience and visual communication. Further cluster analysis is carried out to understand the importance of these factors. A total of 229 completely filled questionnaires are utilized for analyzing the data. ANOVA is used to understand the difference between groups. The study is conducted in the state of Uttarakhand, India.*

### 1. Introduction

Impulsive buying has long remained a puzzle for marketers as well as consumers. However it generates substantial business world-wide and this developed the interest of many researchers as well as marketers in understanding the phenomenon. The nature of impulse buying is not only difficult to understand but also difficult to predict. The subject has been researched for over sixty years. What makes an impulse sale so appealing is that these are instant sales and the customer does not give much thought about the price, reliability, usefulness or other consequences.

In simplest terms, Impulsive buying is unplanned and unintended buying behavior. Hausman (2000) states that Impulsive buying is an important source of income for retailers and between 30% to 40% fall under this category. There are several cues that trigger impulse buying. Impulsive buying behaviour is a universally recognized, pervasive phenomenon and distinctive aspect of consumer lifestyle and thus become the focal point of all marketing activities. (Gardner & Rook, 1988, Rook 1987, Rook and Hoch, 1985). However this phenomenon has remained an enigma and very little is known about the dynamics of internal mechanism and variables that must drive the enactment of such behavior. This kind of buying takes place when the desires are strong enough to override constraints (Hoch, Lowenstein, 1991; Weinberg & Gottwald, 1982). In the absence of self- control people give in to their desires and impulsive buying occurs (Youn, 2000).

## 2. Definitions of Impulsive buying

Traditionally the impulse buying research began in the 1950's. Defining impulse buying was the main topic in early impulse buying literature (1960s - 1990s). The initial study concerned supermarket purchases made by the firm division of Dupont Company. Applebaum (1951) in his exploratory study was the first to suggest that impulse purchasing may stem from the consumer's exposure to a stimulus while in the store; Nesbitt (1959) viewed it as intelligent shopping. In other words, smart shoppers do not plan their purchases, but search for and take advantage of in-store promotions, thus maximizing their buying power. He further states that impulse buying is a result of promotional stimuli and buying items are not decided in advance before starting a shopping trip. For retailers impulse buying is defined as any sort of unplanned buying. (Clover, 1950; Stern, 1962; Abratt & Goodrey, 1990).

"Traditional" marketer-controlled stimuli such as the product itself, the product's position on the shelf, atmospherics (Kotler, 1972), salesmanship, tie-ins have been identified by consumer researchers as prompts for unplanned or impulse purchases. Dittmar et al. (1995) defined Impulsive buying as unplanned buying. Hoch and Lowenstein (1991) explained impulsive buying as struggle between the psychological forces of desires and willpower. Stern (1962) identifies the impulsive mix and then develops a framework. Kacen and Lee (2002) defined impulsive buying as unplanned buying with rapid decision making and a subjective bias in form of immediate possession. Kollat and Willet (1967) advocated that women tend to engage in impulse buying more as compared to men. Rook and Fisher (1995) defined impulsive buying as consumer tendency to buy spontaneously, unreflectively, immediately and kinetically. Rook (1987) advocated that when a customer experiences a sudden often powerful urge to buy something immediately can be called as Impulsive Buying. He further stated that impulse buying is a behavior originating due to impulsiveness. Cobb (1986) reported that impulse buying has long been considered a significant form of consumer buying action. Impulsive buying intention is an intention to buy which is unreflective, unplanned and without deliberation. Wood (1998) expressed impulsive buying as *akrasia* or "weakness of will".

Kacen and Lee (2002) defined impulsive buying as unplanned buying with rapid decision making and a subjective bias in form of immediate possession. Xiao and Nicholson (2012) defined impulsive buying as unplanned and sudden buying act, in response to subjective or external stimuli, accompanied by powerful and persistent urge; after the purchase, the customer experiences emotional, cognitive and/ or behavior reactions, which may become the new trigger of repeated impulsive buying, a reflection of impulsivity traits, socio values about buying beliefs; both a process and an outcome.

Many scholars have argued that the definition of unplanned buying is not sufficient to describe impulsive behavior. Weinberg, Gottwald (1982); Rook & Hoch (1985) stated that the definition of impulse buying should be differentiated from unplanned buying. In their study they observed the emotional response and expression of consumers when indulged in impulsive buying and concluded that this buying was more emotional than normal purchasing.

## 3. Factors affecting Impulsive buying

A number of different factors have been studied by different authors to study impulsivity. Tuley, Millman (2000) focuses on the effect of facility based environmental cues or atmospherics on buyer behavior. The term 'atmospherics' was first used and defined by Kotler about 30 years back. In a study on atmospherics Spangenberg, Gowley and Henderson (1996) noted environmental psychology, Stimulus- Organism-Response (S-O-R). Atmosphere is stimulus that causes customer's evaluation (O) and causes behavior response (R). (Mehrabian and Russell, 1974), (Donavan and Rossiter, 1982). Berman & Evans (1995) divide atmospheric

stimuli or elements on the store, the general interior, layout and design variable, POP and decoration variables. The study advocates that the atmosphere that produces one response in a group of people may produce an altogether different response in another set of people or groups. External cues are specific triggers associated with buying or shopping. They involve market controlled environmental and sensory factors. Internal cues refer to consumer's feelings, moods and emotional states. The study also included atmospheric cues like sight, sound and smell in retail environment that influence desire to purchase impulsively. Eroglar & Machleit (1993), Mitchell (1994). Additional marketing cues like point of purchase displays, promotions and advertisements can affect the desire to buy on impulse. Wilson et al. (2000) opined that store environment has a profound effect on the mood of the shopper, and it has a great role to play in influencing spontaneous consumer decision making. Chen (2001) describes the factors which influence impulsive buying such as external stimuli (buying frequency, store displays, promotions, advertising, atmosphere in stores and retailers) internal perceptions (lifestyle, personality, emotions, money and time pressure) buying behavior (price, time of purchase, payment) and demographic variables (age, gender, income, occupation, household income and social status). It is important for marketers to be aware of these four factors so that they can make a complete and functional marketing plan.

Kwan and Armstrong (2002) in their writings advocated that impulse purchase behavior in shopping situations is the result of the characteristics of the product being purchased, characteristics of the consumer making the purchase and the situational factors surrounding the purchase context. Dittmar (2005) in his study introduced six factors that influence impulsive buying. The first factor is Cost. The lower the cost, the greater the probability of buying on impulse in case of consumer and nondurable goods. Second factor which influences impulsive buying is mass distribution. With easy accessibility and increase in mass distribution the impulsive buying increases. Third factor influencing impulsive buying is Propaganda activities; with more propaganda, the motive of impulsive buying increases. Fourth factor influencing impulsive buying is the Store environment. The location, decoration, layout, light affects the impulsive buying. The fifth factor affecting such buying is income and economic status. Higher income and better economic status decreases the risk of impulsive buying, hence increases impulsive buying tendency. (Vohs & Faber, 2007) suggested that ease of physical examination and proximity to the goods, being able to touch goods or test free samples also stimulates sensory inputs.

Anna S Mattila, Jochen Wirtz (2008) in their investigative study examined the role of environmentally induced stimulation influencing impulse buying. They asserted that two factors viz. perceived crowding and employee friendliness jointly influences consumer's unplanned purchases. Mariri Tendai, Chipunza Crispen (2009) advocated that the in-store shopping environment is very important determinant of impulsive buying. Factors such as in-store background music, store display, scent, in store promotions, prices, shop cleanliness, shop density and store personnel all make up the in store shopping environment. The store ambience can play a truly evocative role by arousing all the senses through different cues. The store ambience plays an important role in making the store more welcoming, friendly and impressive.

Though retailers across the world have realized the power of impulse buying yet not much is known about in store environment and the way it influences unplanned purchases in the skin care category of cosmetics, this study is undertaken in order to develop clarity on the role of different factors existing at purchase point in influencing and shaping impulsive buying behaviour.

#### 4. Skin care Market

The skin care market has long remained an often neglected or least cared for segment of the Cosmetics market. The dominant ones being the colour cosmetics and the hair care sector. The Indian Personal care and beauty industry has been able to maintain a consistent healthy growth since 2013 despite worrying factors looming over the economy in the form of inflation. Under the skin care category the whitening products have emerged as the most popular choice not only amongst the women folk but among the men's segment as well. Taking care of skin especially facial skin has become quite a regime for the young females who wish for flawless, youthful skin. Amongst the other factors which contributed towards growth is rising awareness followed by increased consciousness amongst Indian consumers for their image. Simpi, Sinha (2012) estimated the total size of the Indian retail and beauty market estimated to be of \$ 1.5 billion, with fragrances comprising of the largest component. According to them the skin care segment stood at 19% of the total market. Under the skin care category the whitening products have emerged as the most popular choice not only amongst the women folk but among the men as well. This propelled the manufacturers for adding new claims like spot reduction or skin brightening products to attract the consumers. Skin care market is under nascent stage with penetration level in rural areas very miniscule.

#### 5. Point of Purchase Factors

In the modern shopping environment the point of purchase factors can make or ruin a buying decision. Point of purchase factors are those factors which influences the customer when the customer is present at the buying place. These factors influence in a very direct way and many times the influence is quick or spontaneous. Impulsive buying is unplanned, this kind of buying accounts for majority of purchase especially in items like skin care products where the relative awareness is very less, thus the various factors operating at this point where purchase is made plays very crucial role in shaping the ultimate buying behavior.

#### 6. Research Methodology

This research is based on both exploratory and descriptive design. The exploratory work is done in the form of literature review, which helped in defining the problem and identification of variables. It has diagnostic essence as the impact of point of purchase factors is described.

After undertaking a detailed literature review, twenty two constructs were identified. Many research scholars have used one or more of these factors in understanding impulsive buying in retail setting without taking any product category under consideration. The dependent variable is Impulsive buying and different constructs acting at point of purchase have been identified as independent variables. These constructs being in store promotions, informative graphics/signs, innovative displays, packaging, photo panels, celebrities endorsements, shelf placements, trial options, sales personnel, latest variants, lighting, compatible temperatures, cleanliness, aesthetics, colour, music, scent, quick billing system and familiarity with the store. An attempt is made to study the impact of these constructs on impulsive buying behaviour of skin care products in brick and mortar stores. The study is under taken with the following objectives.

##### 6.1 Objectives

- a) To assess the demographic factors and their role in enhancing consumer impulsivity towards point of purchase factors
- b) To analyze the consumer impulsivity towards point of purchase factors in buying of skin care products.
- c) To determine the influence of residential background on impulsive buying in skin care products at point of purchase.



Data collection is done using structured questionnaire. In order to minimize sampling errors, total of 250 questionnaires were distributed at prominent malls in Dehradun and Haridwar and busy markets in Mussorie. Total of 229 completely filled questionnaires were received back for analysis.

The perception of the respondents is measured using five point likert scale. Likert scale also known as summated rating scale is easy to construct or administer. The respondents were asked to select their choice ranging from strongly agree to strongly disagree. Sophisticated analytical tools like ANOVA, factor analysis are used to analyze the data. Cronbach's Alpha value is found to be 0.8 which shows the reliability and KMO value of 0.6 shows that the data could be subjected to further analysis.

ANOVA was used to identify the impact of various demographics such as age, gender, education and residential background on the factors.

## 6.2 Hypothesis

H0a-There is no significant impact of education level on the perception towards any Point of Purchase factors.

H1a-There is significant impact of education level on the perception towards any Point of Purchase factors.

H0b-There is no significant impact of gender on the perception towards any Point of Purchase factors.

H1b- There is significant impact of gender on the perception towards any Point of Purchase factors.

H0c-There is no significant impact of residential background on the perception towards any point of purchase factors.

H1c- There is significant impact of residential background on perception towards any point of purchase factors.

## 7. Analysis

	<i>Categories</i>	<i>Count</i>	<i>Percentage</i>
Gender	Male	119	52.0
	Female	110	48.0
Age	18-25	79	34.5
	26-39	77	33.6
	40-54	40	17.5
	above 55	33	14.4
Marital Status	Married	109	47.6
	Unmarried	120	52.4
Education Level	Up to matriculate	43	18.8
	intermediate	68	29.7
	graduate	54	23.6
	post graduate	38	16.6
	professional qualification	26	11.4
Family Size	1 to 3 member	121	52.8
	4-5 member	106	46.3
	more than 5 member	2	.9
Occupation	Student	70	30.6
	business	61	26.6
	service	55	24.0
	professional	29	12.7
	housewife	14	6.1

Table 1 Demographic Characteristic of Respondents

Table 1 shows the demographic profile of the respondents. Total of 229 respondents filled the questionnaire. 52% of the total respondents are male and 48% are females. 34.5% of respondents are between the age of 18-25, 33.6% fall in between the age of 26-39, 17.5 percent are in the age of 40 to 54 and 14.4% of respondents fall in the age above 55 years. 47.6% of respondents are married and 52.4% are unmarried. As far as the education level is concerned 18.8% are matriculate, 29.7% are intermediate, 23.6% are graduate. 16.6% are post graduate and 11.4% are professionally qualified. Occupation wise 30.6% are students, 26.6% are in business, 24% are in service, 12.7% professionally qualified and 6.1% are house wives.

	Frequency	Percent	Valid Percent	Cumulative Percent
Urban	98	42.8	42.8	42.8
Valid semi urban	67	29.3	29.3	72.1
Rural	64	27.9	27.9	100.0
Total	229	100.0	100.0	

**Table2: Residential background**

Table 2 shows the residential background. 42.8% of respondents belong to urban areas 29.3% are from semi urban Background and 27.9% belong to rural areas.

	Frequency	Percent	Valid Percent	Cumulative Percent
Department Stores	75	32.8	32.8	32.8
Super Markets	20	8.7	8.7	41.5
Valid Beauty & Cosmetic Stores	90	39.3	39.3	80.8
Malls	39	17.0	17.0	97.8
Others	5	2.2	2.2	100.0
Total	229	100.0	100.0	

**Table3: Place where one act impulsively**

Table 3 shows 39.3% of respondents have showed their preference for Beauty & Cosmetics Stores as places where they tend to act impulsively.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Sun Protection Cream	27	11.8	11.8	11.8
Fairness Cream	83	36.2	36.2	48.0
Anti Aging Cream	41	17.9	17.9	65.9
moisturizing Cream	78	34.1	34.1	100.0
Total	229	100.0	100.0	

**Table 4: Preference in Facial Skincare**

Table 4 shows that the fairness cream is the most popular reason for buying skincare products. Moisturizing is the next most favoured reason. Anti aging is preferred by .9% of the respondents and sun protection cream by 11.8% of the respondents

	Component								Com muni laties
	1	2	3	4	5	6	7	8	
Celebrities endorsing skin care products act like positive reinforcer leading to impulsive buying	.893								
Packaging of skin care products act as positive reinforcer in impulsive buying.	.755	.365							
Displaying skin care products that catch customer's attention acts as positive reinforcer in buying skin care products	.501	.341					-.354	.409	.741
Innovative displays act as positive reinforcer in impulsive buying.		.836							.754
Promotions at place of purchase act as positive reinforcer in impulsive buying of skin care product.		.786							.690
Colors at Point of purchase displays influence me to buy skin care products on impulse.		.565	.485				.470		.867
Compatible temperatures (cool in summers and warm in winters) act as positive reinforcer in buying skin care products			.838						.801
Availability of new/ latest variant act as positive reinforcer for impulsive buying of skin care products			.711						.651
Cleanliness at the place of purchase acts as a positive reinforcer in impulse buying of skin care products.			.618	.420				.407	.896
Creative use of colours at the display point acts as positive reinforcer for impulse buying of skin care products				.837					.822
Mood altering music at the place of purchase acts as positive reinforcer for impulse buying of skin care products	.336			.782					.897
Scents (odour) acts as positive reinforcer in impulsive buying of skin care products.			.350	.609		.540			.824
Helpful sales people act as positive reinforcer in impulsive buying of skin care product.					.840				.840
Availability to touch and feel of the skin care product acts as positive reinforcer in impulsive buying of skin care products		.330			.775				.790
Trial options acts as positive reinforcer in impulsive buying of skin care products.					.649	.324		.301	.768
Shelf placing as regards height of vision acts as positive reinforcer in impulsive buying of skin care products						.770			.760
Familiarity with the store acts as positive reinforcer in impulsive buying of skin care products.						.617	.425		.774

Window displays act as positive reinforcer in impulsive buying of skin care products	.449	.417				.491			.731
Quick billing systems acts as positive reinforce in impulsive buying of skin care products.		.309					.724		.770
Informative graphics / signs of skin care items act as positive reinforce in impulsive buying of skin care							-		.666
Lighting at the place of display of skin care products acts as positive reinforce in impulsive buying.							.724		.77
Graphics such as photo panels add personality to skin care products and act as positive reinforce.	.616							.65	.872
Total	4.943	3.167	2.276	1.772	1.51	1.375	1.185	1.091	
% of Variance	22.47	14.394	10.346	8.056	6.863	6.25	5.386	4.96	
Cumulative %	22.47	36.864	47.21	55.266	62.129	68.379	73.765	78.725	

**Table5: Rotated Component Matrix**

From the above table it was observed that there are three attributes such as Celebrities endorsing skincare products, Packaging of skincare products, displaying skincare products act as positive reinforcer in impulsive buying at point of purchase. These components are grouped as in store Promotions, Innovative displays, promotions and colours acting as positive reinforcers at point of purchase are grouped as second component called merchandising. Compatible temperatures, availability of new/latest variants and cleanliness at the point of purchase acting as positive reinforcer are grouped as third component called ambience. Creative use of colours, mood altering music acting as positive reinforcers at the point of purchase are grouped as the fourth component called Atmospherics. Helpful sales people, availability of touch and feel and trial options are grouped as the fifth component called Support at pop. Shelf placing, familiarity with the store, window displays at the point of purchase are grouped as the sixth component called Display. Quick billing system, Information graphics are grouped under the seventh component called Convenience. Visual communication, lighting and graphics are grouped as the eight component named as visual communication.

	N	Mean	Std. Deviation
In store promotions	229	3.6798	.62151
Merchandising	229	3.4076	.71793
Ambience	229	3.6463	.79935
Atmospherics	229	3.2780	.81282
Support at pop	229	3.6041	.76438
Display	229	3.5167	.63701
Convenience	229	3.7205	.52195
visual communication	229	3.5328	.43177
Valid N (listwise)	229		

**Table 6: Descriptive Statistics**

Table 6 shows the descriptive statistics of the various factors. In store promotions, Ambience, support at POP, convenience, display and visual communication have a mean of 3.5 or above which shows that respondents have positive perception towards the impact of these factors as positive reinforcers for skin care products at point of purchase. The standard deviation of atmospherics is highest (0.812) which implies that the responses on the attributes related to this factor is somewhat fluctuating from agree to disagree.

Table 7 shows that both male and female respondents have indicated their preference towards convenience as the most favored factor. Therefore convenience at the point of purchase leads to impulsive buying of skin care products in both genders.

		ANOVA				
		Sum of Squares	Df	Mean Square	F	Sig.
In store promotions	Between Groups	.419	1	.419	1.084	.299
	Within Groups	87.653	227	.386		
	Total	88.072	228			
Merchandising	Between Groups	.012	1	.012	.023	.878
	Within Groups	117.504	227	.518		
	Total	117.516	228			
Ambience	Between Groups	.481	1	.481	.751	.387
	Within Groups	145.202	227	.640		
	Total	145.683	228			
Atmospherics	Between Groups	.341	1	.341	.516	.473
	Within Groups	150.291	227	.662		
	Total	150.633	228			
Support at pop	Between Groups	2.612	1	2.612	4.539	.034
	Within Groups	130.602	227	.575		
	Total	133.214	228			
Display	Between Groups	.213	1	.213	.525	.470
	Within Groups	92.306	227	.407		
	Total	92.519	228			
Convenience	Between Groups	.682	1	.682	2.519	.114
	Within Groups	61.432	227	.271		
	Total	62.114	228			
Visual communication	Between Groups	.202	1	.202	1.084	.299
	Within Groups	42.302	227	.186		
	Total	42.504	228			

Table 7: Mean

		ANOVA				
		Sum of Squares	Df	Mean Square	F	Sig.
In store promotions	Between Groups	.419	1	.419	1.084	.299
	Within Groups	87.653	227	.386		
	Total	88.072	228			
Merchandising	Between Groups	.012	1	.012	.023	.878
	Within Groups	117.504	227	.518		
	Total	117.516	228			
Ambience	Between Groups	.481	1	.481	.751	.387
	Within Groups	145.202	227	.640		
	Total	145.683	228			
Atmospherics	Between Groups	.341	1	.341	.516	.473
	Within Groups	150.291	227	.662		
	Total	150.633	228			
Support at pop	Between Groups	2.612	1	2.612	4.539	.034
	Within Groups	130.602	227	.575		
	Total	133.214	228			
Display	Between Groups	.213	1	.213	.525	.470
	Within Groups	92.306	227	.407		
	Total	92.519	228			
Convenience	Between Groups	.682	1	.682	2.519	.114
	Within Groups	61.432	227	.271		
	Total	62.114	228			
Visual communication	Between Groups	.202	1	.202	1.084	.299
	Within Groups	42.302	227	.186		
	Total	42.504	228			

Table 8: ANOVA

From the above table it is observed that for support at POP, the significance value is less than 0.05, which implies that Null hypothesis is rejected. In other words there is significant impact of gender of respondents on the perception towards any point of purchase products.



**Report**

education level	In store promotions	Merchandising	Ambience	Atmospherics	Support at pop	Display	convenience	Visual Communication
Up to matriculate	3.6744	3.3876	3.6977	3.0775	3.5116	3.4109	3.6512	3.5349
Intermediate	3.6225	3.3284	3.7108	3.2206	3.6225	3.4951	3.6691	3.5294
Graduate	3.6481	3.5000	3.5494	3.3951	3.7654	3.5432	3.7778	3.5185
post graduate	3.7719	3.3246	3.5263	3.4211	3.4474	3.4825	3.6579	3.5395
professional qualification	3.7692	3.5769	3.7692	3.3077	3.6026	3.7436	3.9423	3.5577
Total	3.6798	3.4076	3.6463	3.2780	3.6041	3.5167	3.7205	3.5328

**Table 9: Mean**

Table 9 shows that respondents up to matriculate prefer Ambience as the most favored factor. Intermediate qualified respondents also prefer Ambience, graduate have showed their increased preference for Convenience, layout is the most favored in case of post graduates and professionally qualified have shown preference for convenience. Overall it is observed that Convenience is the most preferred factor.

		Sum of Squares	Df	Mean Square	F	Sig.
In store promotions	Between Groups	.809	4	.202	.519	.722
	Within Groups	87.263	224	.390		
	Total	88.072	228			
Merchandising	Between Groups	1.912	4	.478	.926	.449
	Within Groups	115.604	224	.516		
	Total	117.516	228			
Ambience	Between Groups	1.843	4	.461	.718	.581
	Within Groups	143.839	224	.642		
	Total	145.683	228			
Atmospherics	Between Groups	3.493	4	.873	1.329	.260
	Within Groups	147.140	224	.657		
	Total	150.633	228			
Support at pop	Between Groups	2.730	4	.682	1.172	.324
	Within Groups	130.484	224	.583		
	Total	133.214	228			
Display	Between Groups	1.934	4	.484	1.196	.313
	Within Groups	90.585	224	.404		
	Total	92.519	228			
Convenience	Between Groups	1.992	4	.498	1.855	.119
	Within Groups	60.122	224	.268		
	Total	62.114	228			
visual communication	Between Groups	.030	4	.007	.039	.997
	Within Groups	42.475	224	.190		
	Total	42.504	228			

**Table 10: ANOVA across Education Level of Respondents**

From the above table, it is observed that for all factors the significance is greater than 0.05 which implies that the Null hypothesis is accepted. In other words there is no significant impact of education level of respondents on the perception towards any point of purchase factors.

residential background	In store promotions	merchandising	Ambience	Atmospherics	Support at pop	Display	convenience	Visual communication
Urban	3.6176	3.4020	3.7582	3.2353	3.5882	3.4837	3.7059	3.4755
semi urban	3.8194	3.4259	3.4861	3.3287	3.6528	3.5370	3.7361	3.5903
Rural	3.6121	3.3939	3.6485	3.2909	3.5697	3.5515	3.7273	3.5636
Total	3.6798	3.4076	3.6463	3.2780	3.6041	3.5167	3.7205	3.5328

**Table 11 : ANOVA across residential background**

The highest mean of 3.8194 is observed for in store promotions amongst semi urban respondents. Semi urban respondents have shown impulsivity towards skincare products due to convenience factor also.

Amongst the urban respondents ambience is the most favored factor followed by convenience. Rural respondents favour convenience the most, followed by in store promotions.

		Sum of Squares	Df	Mean Square	F	Sig.
In store promotions	Between Groups	2.050	2	1.025	2.693	.070
	Within Groups	86.022	226	.381		
	Total	88.072	228			
Merchandising	Between Groups	.038	2	.019	.036	.964
	Within Groups	117.478	226	.520		
	Total	117.516	228			
Ambience	Between Groups	3.124	2	1.562	2.477	.086
	Within Groups	142.558	226	.631		
	Total	145.683	228			
Atmospherics	Between Groups	.380	2	.190	.286	.752
	Within Groups	150.252	226	.665		
	Total	150.633	228			
Support at pop	Between Groups	.261	2	.131	.222	.801
	Within Groups	132.953	226	.588		
	Total	133.214	228			
Display	Between Groups	.208	2	.104	.254	.776
	Within Groups	92.311	226	.408		
	Total	92.519	228			
Convenience	Between Groups	.042	2	.021	.076	.927
	Within Groups	62.072	226	.275		
	Total	62.114	228			
Visual communication	Between Groups	.625	2	.313	1.687	.187
	Within Groups	41.879	226	.185		
	Total	42.504	228			

**Table 12 ANOVA**

Table 12 shows that there is no significant impact of residential background on point of purchase factors. Hence Null hypothesis holds valid.

### Segmentation of consumers using Cluster Analysis

Cluster analysis is a major technique for classifying a large number of information into manageable meaningful lots. It is a data reduction tool that creates subgroups that are more manageable than individual datum. Like factor analysis, it examines the full complement of

inter-relationships between variables. Using cluster analysis, different marketing strategies preferred by customers can be classified with greater precision and direct appeal within the segment. Targeting specific segments is cheaper and more accurate than broad-scale marketing. Customers respond better to segment marketing which addresses their specific needs, leading to increased market share and customer retention.

	Cluster				
	1	2	3	4	5
In store promotions	4.08	2.33	3.36	3.44	3.62
Merchandising	3.73	1.67	3.46	2.50	3.67
Ambience	4.18	3.33	4.40	2.96	3.43
Atmospherics	4.02	4.67	3.40	2.98	2.85
Support at pop	3.79	1.33	3.65	2.71	3.97
Display	3.93	2.00	2.96	2.93	3.70
Convenience	4.05	4.50	3.19	3.23	3.88
Visual communication	3.85	2.00	3.67	3.16	3.48

Table 13: Final Cluster Centre

	1	66.000
	2	1.000
Cluster	3	24.000
	4	49.000
	5	89.000
Valid		229.000
Missing		2.000

Table 14: Number of Cases in each Cluster

A cluster analysis was run on 9 merchandising factors shorted out of twenty two variables each responding to different motive of merchandising. A K-mean cluster analysis method produced five clusters, between which the variables were significantly different in the main. From the table it could be seen that cluster 1 has 66 respondents. For them Ambience is the prime motive (4.18) followed by in store promotions (4.08). The other two motives Convenience (4.05) and Atmospherics (4.02) are important as well. In cluster 2 there is 1 respondent. Their prime motives are atmospheric (4.67) and convenience (4.50). In cluster 3 there are 49 respondents, for them the prime motive is Ambience (4.40) followed by Visual communication (3.67). In cluster 4, there are 49 respondents whose first choice is in store promotions (3.44), the last cluster is of 89 respondents whose prime motive is support at POP (3.97) followed by convenience (3.70).

## 8. Conclusion

This study shows six important factors lead to impulsive buying in skincare cosmetics. These factors are identified as in store promotions, ambience, support at POP, convenience, displays and visual communications. These factors have high and significant relationship and are important for managers to induce impulsive buying in their stores. Consumers tend to be the most impulsive when buying skin care products in beauty and cosmetics store. Fairness segment and facial skincare products have been rated as the most important. This comes as no surprise as skin lightening by all accounts appears to be sad preoccupation of many Indian consumers. Impulsivity is significantly affected by Gender of the respondents at point of place. However no impact of education and residential background is observed on impulsivity at point of purchase in skincare products. The most preferred factor driving impulsiveness amongst consumers is support at point of purchase.

## 9. Scope of Research

Research on the buying behavior of consumers is an important aspect of marketing research. Traditionally the consumer is expected to behave rationally, however this is far from true. Increased amount of buying is attributed to impulse. This research provides inputs in planning and designing retail settings which will propel the impulsive buying of skincare products. The role of point of purchase is extremely important in generating sales and thus contributes to the profits of the organizations. Further research can be conducted using a large sample size or larger territory. Other variables could also be included in future studies.

## 10. Limitations

The empirical study is limited in scope as the sample respondents are drawn from Dehradun, Mussorie and Haridwar in Uttarakhand, India. The research findings are limited to the role of point of purchase factors in skin care products. The sample size is 229. The selected parameters form the basis of research. The opinions of the respondents are subject to prevailing business conditions which may vary from time to time.

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## Environmental risk management in loan activity in Polish banks

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### Key words

Environmental risk management, ecology, value at risk, bank

### Abstract

*In the banking sector worldwide more and more financial institutions show interest in credit servicing of ecological investment. That is why banks, step by step, enlarge their loan offer, raise its attractiveness according to conditions, availability and rate of interest, as well as the amount of a granted loan and the length of its repayment period. The document which initiated the beginning and development of ecological banking is the UNO declaration 'Banking and Environment', in which signatory banks declared an obligation to take ecological risk into consideration while granting loans, promoting new services and banking products of ecological nature and combining their statutory activity with environmental protection. By accepting this declaration, banks commit themselves, among others, to:*

- analyze loan applications paying attention to whether they fulfill formal and legal requirements of environmental protection,*
- apply loan preferences and facilitation for investments and investors who accomplish environmental protection rules,*
- apply ecological criteria while analyzing and assessing technical and economic assumptions of investment projects within applicable procedures of granting loans,*
- identify and define risk extent of environmental protection in decisions concerning loans,*
- offer products and services which finance economic pro-ecological undertakings*
- refuse loans with bad ecological reputation or investments to units which do not fulfill environmental requirements.*

*All these actions of banks are taken in order to limit ecological risk, which gains a particular significance in the contemporary world.*

### Introduction

The term environmental risk is understood in various ways by various authors. G. Borys defines it as 'a possibility of occurring natural disasters at a company location or a probability of ecological disaster caused by equipment breakdown or technology which is applied in a company' (Borys 2000). This definition narrows ecological risk understanding to a possibility of occurring sudden and unexpected damaging with disastrous results. However, it omits ecological threats caused by affecting specific factors as well as threats which are generated. Other factors such as ecological risk results of a smaller extent, (for instance, financing by a bank launching a new product on the market, whose use in an unforeseeable way degrades the environment) should be considered. Environmental risk is also defined as an antropogenic occurrence (breakdown, catastrophe) or nature one (catastrophe, natural disaster) threatening the environment, economy or health and life of a human beings, whose probability may be defined (Poskrobko 2007). Ecological risk may have drastic results. If it is disregarded during a loan process, this may mean straight a risk of losing a profit or even capital (Perman, Ma, McGilvray, Common 2003). Therefore, each financial institution should take ecological risk into consideration in their activity (Dziawgo 2010).

Environmental risk occurs in bank activities in two planes:

- 1) as an environmental risk of a bank institution, that is in the functioning of the bank itself,

2) as a risk of corporations being interested in business with a bank.

Therefore, environmental (ecological) risk in bank activities can be defined as a possibility of negative environmental results occurring in the action of people and businesses having a contact with the bank and the bank itself in a given period of time.

Identification and assessment of ecological risk is becoming a very difficult task (Perman, Ma, McGilvray, Common 2003). In order to do it a variety of methods are applied, to which the author, while researching operational and ecological risks in banks, paid a lot of attention (Kulpa 2015).

In the aspect of a contemporary social and economic development ecological orientation of banks may become one of main factors. These factors enable banks to achieve in a long time a stable acceptance of consumers in accordance with human beings' existing aims on the earth (Poskrobko 2012). Activities in this scope are called Corporate Social Responsibility (CSR). Actions within CSR are taken by organizations whose manager staff's decisions are not limited only to multiplying shareholders' profits but also take into consideration interests of providers, workers, retailers, local people and broadly understood interest of the society. Therefore, ecological aspects are from the one side a sign of peculiar ecological responsibility of contemporary loan institutions, and on the other side may determine a competitive advantage of these institutions which will acquire social approval of their activity which will have an influence on the growth of their participation in the market. Some researchers call such actions ecologisation of loan institutions (Zabawa 2013).

The basic principle of environmental responsibility of a loan institution is the care and attention to ensure a stable improvement of life quality both of the present as well as future generations. This may be achieved by shaping proper proportions between three kinds of capital bringing in development of: economic, natural and human ones. It is convergent with the principle of stable and sustainable economic development, which is included in the set of regulations concerning capital requirements and risk management in banks. These regulations were, among others, issued by Basel Committee on Banking Supervision, called Basel III (Basel Committee on Banking Supervision 2010). Premises of ecological orientation of loan institutions result from two principal groups of factors:

- 1) global trends of social, economic and environmental development system which in an objective and natural way force ecologisation of contemporary banks,
- 2) advantages which are a result of ecologisation of banks themselves.

The principle of ecological responsibility is not only placing ecological aims in the strategy of business development of the bank at the point bank - corporate and individual clients but also taking this aspect into consideration in a bank's economy so that ecology will be a chance and not a threat for the development of a given institution.

Here one can point out two groups of activities. The first one concerns financing typical ecological investments, for instance, wind power stations, sewage treatment plants, whereas the next group concerns financing standard business investments which base on ecological solutions. This must be stressed that eco-economy of banks, in the context of the mentioned idea of stable and sustainable development, is an extremely important element of contemporary economy development. Activities in the scope of eco-economy still are not accepted enthusiastically by all loan institutions. An important problem here is the ability to value assessment of ecological risk, particularly in the context of the amount of bank's own capital, which makes it possible adequate safety of a bank against the results of this risk. It is important for banks to realize definite actions connected with environmental protection.

## **Environmental activities of chosen Polish banks**

### **Environmentally activity of Bank for Environmental Protection**

Among Polish banks with pro-ecological orientation Bank for Environmental Protection (Bank Ochrony Środowiska SA) plays an important role. This is the bank which has granted the largest number of preferential loans and it is the bank with the greatest experience in financing ecological undertakings (Toruński, Wyrębek 2010). Bank for Environmental Protection (BEP) is the bank with the idea to service undertakings serving environment protection and support a balanced development of the country. For example, in the area of wind energy scope BEP has granted several dozen loans so far, at the value of over 120 million EUR. In 2013 BEP granted 4,904 loans (pro-ecological loans granted for environmental protection) the amount was 37 million EUR including 34 million EUR on air protection, 0.8 million EUR on water protection and 2.2 million EUR on soil protection (Central Statistical Office 2014). Among various tasks financed by BEP a significant group are projects connected with using renewable energy sources (RES). The bank's experience in this scope are 1,550 projects, on which over 170 million EUR have been granted. Loans granted in the cooperation with The National Fund for Environmental Protection and Water Management are directed to the greatest investment tasks; in 2013 the amount of 15 million EUR was granted. At present, the bank offers loans for investments connected with using RES, first of all preferential loans granted in the cooperation with regional funds of environmental protection and commercial loans. In cooperation with regional environmental protection and water management funds 22.5 million EUR was granted on such loans. BEP offers, among others, a special line KfW5, which is designed for small and medium businesses for financing tasks connected with using RES. They were mainly: modernization of heating systems, thermo-modernization of buildings, backyard sewage treatment plants, removing products containing asbestos. A bank negotiates the granting of loan conditions applying them to the specificity of investment, divides payment of particular sources of financing, monitors achieving ecological effects.

### **Loan activities limiting environmental risk in Bank Pekao S.A.**

Bank Pekao S.A. follows an environmental awareness policy which comes from the United Nations Environment Programme Finance Initiative (UNEP FI). This initiative refers to natural environment and sustainability, considering environmental impact factors in performing credit risk analyses of its transactions as well as in processes monitoring transactions (Bank Pekao S.A. 2014). In its everyday activities Bank Pekao S.A. strongly supports protection of the environment. Environmental risk assessment is one of the crucial factors which evaluates credit transactions executed with businesses. It involves a number of steps: from review of a customer's business profile and preparation of assessing a preliminary environmental risk assessment, to assessment proper, which includes a visit at a client's premises and review of documents which relate to the environmental aspects of an undertaking, to management phase, which includes a credit decision and agreement execution, to monitoring of environmental risks. If a borrower's business profile creates potential environmental risk, the bank does its best with the customer to reduce the potential implications of the environmental risks. The bank and client cooperate to identify such risks, assess their scale and mitigate their potential impact. Such a cooperation, which forms part of credit risk assessment, relies on the methodology and industry guidance developed by the European Bank for Reconstruction and Development. The bank does not finance all types of business activities on environmental grounds. Such activities are listed in the Environmental Exclusion List prepared on the basis of international standards, including the Convention on International Trade in Endangered Species (CITES). Furthermore, the bank refuses to finance trade in goods representing environmental threats or projects which are

dangerous to health and public safety laws. The bank's credit risk policy prohibits it to finance activities which may be risky environmentally. In line with its credit policy, the bank supports and is willing to accept projects with environmental benefits. The commitment to the protection of the Polish bison has been an aspect of the development and promotion of the bank's corporate social responsibility in the sphere of ecology.

## Results and Discussion

### Environmental risk associated with lending activities

The most important instrument to support environmental protection by banks is pro-ecological loans. Loans for financing ecological undertakings can be granted by banks on market conditions when an undertaking fulfills economic and ecological criteria and preferential ones when an undertaking fulfills ecological criteria but not economic ones in full and financial support is required. Then a less expensive loan makes economic realization of this undertaking possible. Preferences for such a loan refer to: extra money to interest, a lower loan commission and writing-off a part of a loan. Loan preferences can be applied when banks distribute special credit lines from external sources or when they create their own funds of support.

Commercial banks in Poland are engaged in granting pro-ecological loans connected mainly with modernization and innovation of businesses, which is in favour of promoting new technologies of production which is 'environmentally friendly'. Furthermore, loan activity of commercial banks in the scope of environmental protection is directed to granting loans for investments directly connected with environmental protection in the area of: water protection (e.g. building of water treatment plants of city and industrial sewage), atmosphere (e.g. investments within limiting emission of pollution), economic use of waste (landfill building, organization of recycling) (Górka, Poskrobko, Radecki 2001).

According to the latest data issued by Polish Central Statistical Office in 2013 pro-ecological loans were granted on a sum of 456 million EUR, mainly in the form of commercial credits - 419 million EUR. Among commercial credits, credits for purchase of foods and appliances for environmental protection purpose equipment are predominant, the amount is 328 million EUR. In the second place there are loans coming from foreign investment of financial institutions such as EBI, CEB and KfW). The ecological effects achieved after completing actions co-financed by the bank for Environmental Protection only in 2013, as a result of finishing tasks co-financed by BEP with the use of pro-ecological credit were: reduction of particulate emission 155 tons/year, reduction of SO<sub>2</sub> emission 1,817 tons/year, reduction of NO<sub>x</sub> emission 618 tons, reduction of heat consumption and loss as well as the use of primary energy 68,982 GJ/year, production of electricity with the use of renewable energy sources 376,385 MWh/year.

The most popular source of financing structural projects is a bank loan, it is shown by world data as well as Polish ones. It has been used since the start of functioning of the system of EU funds in Poland by businesses and self-government units which have good financial standing and suitable collateral. Credits financing EU projects connected with investments in ecological protection are bridging loans (pre-financing a part of a project to be subject to refund) or credits financing a beneficiary's own contribution and unqualified expenses of a project. They are granted by commercial banks, cooperative banks and state banks, all beneficiaries can use them. The largest amount of funds obtained within foreign help came from Operational Program Infrastructure and Environment (for years 2007- 2013 28 billion Euros was allotted and in the program for 2014 - 2020 over 32 billion Euros will be allotted). From the point of view of allotting the given assistance a majority of funds was spent on financing projects connected with water protection (over 412 million EUR in 2011).



Bridging loans are the most important loan products apart from loans financing unqualified expenses of a project and co-financing one's own contribution. They are equally important parts of bank activities in the area of environmental protection. They serve to ensure financial liquidity during the period from spending money to the date of receiving a refund. A considerable part of ecological investment loans is granted to local government units. Green banking assumes that the environmental business model should consider all above mentioned ecological solutions; but it depends on investment risk, which is very high in Poland.

It must be mentioned that these investments carry a lot of environmental risk, but not as big as investment in the traditional sources of energy. It is difficult to foresee, for instance, in investment in traditional sources of energy how natural environment will behave both during realization and exploitation of an investment (e.g. power plant in Fukushima). Because of violent shrinking of mineral deposits and a big ecological risk while using traditional sources of energy threatening with climate changes, world tendencies are moving towards the development of renewable energy. Together with global economic development an awareness of environmental risk among banks and investors must grow (Baron 2013).

### **Environmental risk management in banks**

Each bank in its loan activity should take ecological risk into consideration that is a risk connected with environmental protection. Ecological risk is usually examined together with credit and operational risks. Therefore, ecological risk management in a bank should be realized in two platforms. These risks interpenetrate each other, sometimes multiplying the results of their occurrence in practice. There could be some instances like financial instrument transactions and the earthquake in Kobe which led to a loss of 1.3 billion USD and bankruptcy of Barings Bank, the oldest British bank (Kulpa 2014).

Operational risk management is a decision making process whose aim is to reduce a probability of occurring an ecological event causing a threat, securing against possible damage or reducing their size. Risk management process is facilitated by methods of ecological risk assessment (Poskrobko 2007). In the process of environmental risk management one should consider the following areas:

- ecological risk assessment connected with a given loan transaction, cost assessment connected with occurring an ecological event;
- assessing client's abilities and engagement in effective coping with ecological risk connected with their economic activity;
- defining kinds of ecological events exposing a bank to potential risks and their acuteness;
- taking indispensable steps towards bank's protection against its exposure to these risks and financial obligations resulting from them;
- current risk monitoring resulting from ecological problems occurring in transactions and reacting to changes in bank's exposure to these risks;
- taking risk and potential obligations into account while passing on a fixed property which is collateral to bank's ownership or while performing restructure tasks.

In the examined banks the process of ecological risk management is realized in 4 phases which consecutively include:

- 1) Phase I: inspection according to environmental protection
- 2) Phase II: ecological risk assessment
- 3) Phase III current ecological risk management
- 4) Phase IV monitoring ecological risk.

Re 1: The aim of screening is defining a character and a range of actions within ecological risk assessment for a given transaction. The review according to environmental protection is



performed for all applied loan transactions with businesses. From further processing a bank excludes transactions financing actions being placed on a list of environmental exclusions, that is transactions which a bank excludes from loan processing

Re 2: In the phase of ecological assessment a bank realizes the following aims:

a) Assessing a client's creditworthiness to a responsible protection against ecological risks which creates potential obligations for a bank.

b) An order to apply suitable means to ensure that the exposure of a bank to such obligations should be acceptable during the lasting period of a transaction.

Re 3: During the phase of current environmental risk management a bank performs an overview of reports concerning credited ecological risk and works out, together with a legal department suitable ecological clauses and requirements concerning information passing and report submitting which should be included in a transaction agreement. In order to limit environmental risk a bank can ask for insurance, guarantee or collateral against liability. In this phase a bank can change transaction conditions (e.g. a form of collateral, period of repayment, extra guarantees, submitting extra expertise etc), ask a client to implement environment management program, e.g. ISO 14001 or EMAS. Furthermore, it is necessary that a bank should be informed about all future changes in the risk profile of a given transaction. It is expected that a client should submit all copies of notices about imposed penalties for environmental pollution to a bank. A client is expected to inform a bank about planned or carried out inspections within the scope of environmental protection, changes in conditions of given permissions and licenses, submitting reports from monitoring performed by a client and inspection in an ecological area of a business run. Ecological risk is acceptable when potential obligations resulting from ecological problems do not threaten financial stability of a client or their ability to repay funds to a bank.

Re 4: The aim of the monitoring phase of environmental risk is to ensure that after starting a transaction a bank would receive as soon as possible important information concerning ecological problems. During the monitoring phase of ecological risk it must be ensured that during the whole period of a lasting transaction a bank should receive from a client all required reports concerning ecological risks. These reports are subject to examination and assessment by a bank, if necessary a bank may issue suitable recommendations.

All these actions aim to minimize the effects of ecological risk which a bank must balance by separating a proper buffer amount from bank's own capital.

### **Calculating capital value for covering environmental and operational risk for the purpose of capital adequacy of a bank**

Defining capital requirements of a bank to cover environmental risk is not an easy task, they are included in credit and operational risk categories. Below, we will pay attention to the risk of loss resulting from improper or failing internal processes, people and system, or also from external events pointing out internal and external sources. Internal risk is connected directly with business functioning which cooperates with a bank. And here one can mention the reason or result of risks connected with fire, stealing, explosion, equipment breakdown, electrical damage, tool wearing out, bad technology, bad managerial and financial decisions, incompetence of employees or personal risk connected with accidents while working. Natural threats like floods, earthquakes, hurricanes as well as political and economic risks caused by ecological panic and other ecological threats occurring around a bank can be considered as external risk (Filipiak, Dylewski 2010). These risks must be secured with proper capital.

While making projects of New Capital Accord (NCA) (Basel Committee on Banking Supervision 2004) some bank representatives claimed that environmental risk as part of

operational risk is not possible to be quantified in a way that would guarantee credibility of achieved results. They pointed out difficulties with measurement which they saw in using complicated mathematical approaches (Kulpa, Zaręba 2013).

Capital requirement calculated by using advanced approaches requires the possession of data base concerning sets of internal events, external events, operational risk scenarios, key environmental and operational risk indicators. An internal model used to calculate the value of capital requirement for environmental and operational risk is accepted by the board of a bank according Pillar I of NCA while using advanced approaches (AMA - Advanced Measurement Approach).

The internal model is based on **four** basic sets:

- 1) data concerning internal losses,
- 2) data concerning external losses,
- 3) data concerning operational risk scenarios,
- 4) data concerning key operational risk indicators.

Data concerning internal losses are events concerning environmental and operational losses incurred by internal units of a bank.

Data concerning external losses are events concerning operational losses incurred by financial institutions and other banks nationwide and worldwide ones. External data come from interbank and international bases of environmental and operational losses and a public base of environmental and operational losses.

Data concerning scenarios constitute a set of fictitious events used to integrate internal and external data in the area of high amount losses but of a low frequency.

Data concerning key environmental and operational risk indicators come from surroundings and data coming from internal audit and they inform, basing on previous experience of potential exposition of a bank to environmental and operational risk.

In the following model proposal with universal possibility of applying AMA in a commercial bank, the calculation of capital requirement is used by subsequent iteration of stages of estimating sizes which are necessary to determine adequate capital for covering operational risk in a bank by using Loss Distribution Approach - LDA. The proposal of the following model is based on experience of one of the examined banks.

The LDA method suggested by NCA is a method of calculating capital necessary to cover losses for operational and environmental risk in a bank by using the loss distribution model. Historical data for estimating distribution and at the same time for calculating the capital size are taken from the period with values of at least 5 years. However, in order to estimate a future value of losses one can take a longer period. In this method, the size of capital for covering losses resulting from occurring events connected with operational and environmental risk is an expected and unexpected losses -  $C_{AMA}$ .

$$C_{AMA} = EL + UL \quad \text{where}$$

EL - expected losses;

UL - unexpected losses

Total capital for operational and environmental risk  $C_{OPEN}$  is equal to OpEnVaR calculated with taking available reserves into account is:

$$\underline{C_{OPEN} = OpEnVaR = VaR - EL}$$

## Conclusions

The data in Table 1 show a scale of a capital reserve which banks must create from their own capital in order to secure operational and ecological risk. Basing on a survey of 16 banks working in Poland only in 2014 an amount to be spent on operational risk results was over 16

million EUR. At the moment it is not possible to reach exact published data concerning the size of the capital adequacy of banks for ecological risk, it is included in the amount of capital securing credit risk as well as operational risk. In the case of operational risk we can distinguish from historical data base events resulting in losses of banks because of events connected with natural environment (Kulpa, Magdoń 2012). If we accept the estimation that this influence is 10%, so in the surveyed banks 1.6 billion EUR is separated from banks' own capital for securing this risk, that is, such an amount could be used as extra capital for financing economy.

The Basel Committee should accept environmental risk and their increasing importance directed towards the stability and sustainability. Based on this, they should stimulate and support bank regulators to work out, together with banks, best practice in the management of environmental problems and gather all the data which are necessary and perform analyses to make banks understand better and be able to address environmental risk in the future. Authorities which supervise banks pay attention to the feasibility of including forward- looking scenarios that evaluate the potential financial stability impact of granting loans to environmentally unsustainable or sustainable task over time in Pillar 2 - Supervisory Review stress tests. Supervising institutions should be obliged to scrutinize Pillar 3 - Market Discipline in order to estimate the feasibility of banks to disclose information about being exposed to and managing environmental risk.

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Table 1. Share of environmental and operational risk capital requirement in the equity of banks										Average share of risk capital requirement in the equity
Bank	2012			2013			2014			
	Equity	Environmental-operational risk requirement	Share of risk capital requirement in the equity	Equity	Environmental-operational risk requirement	Share of risk capital requirement in the equity	Equity	Environmental-operational risk requirement	Share of risk capital requirement in the equity	
Alior Bank	580045	18035	3,11%	518930	18200	3,51%	927177	37213	4,01%	3,61%
BGK	453251	25306	5,58%	1737440	27413	1,58%	1957125	27647	1,41%	4,00%
BGŻ	759119	38988	5,14%	854822	45120	5,28%	918857	50174	5,46%	5,87%
BNP Paribas	85857000	4092000	4,77%	80048000	4029000	5,03%	77168000	4355000	5,64%	5,14%
BPH	997633	69589	6,98%	1067867	67967	6,36%	1071476	59159	5,52%	6,83%
BPS	250863	10495	4,18%	223547	12873	5,76%	143488	14667	10,22%	6,34%
BZ WBK	1989424	118771	5,97%	2808410	183652	6,54%	3060536	220495	7,20%	6,66%
Credit Agricole	38590000	1800000	4,66%	47341000	2000000	4,22%	47267	1700	3,60%	4,10%
Deutsche Bank	57015000	5018000	8,80%	55464000	5253000	9,47%	67787000	7598000	11,21%	9,16%
EuroBank	277773	36884	13,28%	243285	32560	13,38%	291337	26239	9,01%	12,27%
Getin Noble Bank	1289486	61735	4,79%	1414837	66517	4,70%	1566912	62215	3,97%	4,99%
ING	1624205	96989	5,97%	1756848	105517	6,01%	1757619	107759	6,13%	6,29%
Pekao SA	4705855	240311	5,11%	4810162	254179	5,28%	4707251	165587	3,52%	5,19%
PKO BP	4896294	157607	3,22%	5137201	152151	2,96%	5805082	178073	3,07%	3,98%
Raffaelsen Polbank	1309157	75886	5,80%	1284201	79164	6,16%	1289128	77313	6,00%	6,39%
UniCredit	62018395	4094938	6,60%	57651159	4161024	7,22%	54856807	3538233	6,45%	6,89%
Total:	262613501	15955534	6,08%	262361708	16488336	6,28%	217608032	16343181	7,51%	6,06%

Source: Author's own study based on disclosure of capital adequacy of polish banks; all positions in thousands EUR, calculation based on average NBP exchange rate

# Effect of transformational leadership on strategic human resource management and firm success of Toyota's dealer in Thailand

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## Keywords

Transformational Leadership, Strategic Human Resource Management, Firm Success

## Abstract

*This study investigates effect of transformational leadership on strategic human resource management and firm success of Toyota's dealer in Thailand. Following to the existing literature, transformational leadership is an origin of strategic human resource management that leads to firm success. Therefore, transformational leadership in the dimension of intellectual stimulation is important to create strategic human resource management for the success of firms. The sample of 400 Toyota's dealer businesses in Thailand and statistics used are tested by ordinary least squared regression. Furthermore, response bias, validity and reliability were examined by researcher. These results reveal that intellectual stimulation has significant positive effect on strategic human resource management. Furthermore, intellectual stimulation and inspirational motivation still have has significant relate to firm success by themselves also. Then, strategic human resource management has significant positive effect on firm success respectively. Subsequently, managerial and theoretical contributions, and suggestions for further research are presented.*

## 1. Introduction

During increasing population and a higher intensity of competition in the 21st century, the way in which a company is managed - with regards to transactional leadership and transformational leadership - is the important factor leading to better performance of firms. In the new economic era, human resources that include strategic management styles can be the key to the success of businesses. The human resources department is not the only agency of support as in the past. However, properly conducted strategic human resources management is the key of business success in the modern era. This research studies the concept of transformational leadership in relation to the concept of strategic human resource management for enhanced effectiveness in the production of enterprise (Zhu, Chew, and Spangler, 2005).

When considering the business model of the Toyota car dealership in Thailand, Thairath newspaper online (2014) (<http://www.thairath.co.th/content/439762>) reported that the sales volume of Toyota's cars fell in 2014 when compared with 2013, it was suggested that this was due to the political situation in the early months of the year, and the first-car project of the Thai government having finished. The research of Loshali and Krishnan (2013) focuses on transformational leadership affecting the performance of a firm. Leading researchers believe that business car dealers such as the Toyota brand that have high transformational leadership of executives through the use of strategic human resource management processes will have a positive effect on the performance of Toyota's car dealership in Thailand. Moreover, the literature review reveals that there are few studies describing the relationship between transformational leadership towards strategic human resource management, and firm success of Toyota's car dealership in Thailand.

For the reasons mentioned above, this research studies the effect of transformational leadership on strategic human resource management when considering firm success of Toyota's



dealership in Thailand. The purpose of this research is to examine the relationship between the effects of transformational leadership and strategic human resource management on the success of Toyota's car dealership. The results of this study can be used as guidance for administrating the development of Toyota's dealership in Thailand in relation to the planning, development and deployment of business operations. Furthermore, these data can be used to improve and develop the Toyota dealership, and help to alleviate the problem of the current situation of the Toyota dealer in Thailand, and to enhance the ability of the company to effectively compete against other firms.

## 2. Literature Review and Hypotheses Development

The conceptual model (figure. 1) demonstrates the relationships between transformational leadership, strategic human resource management and firm success. In this study, strategic human resource management consists of six activities, namely; selection, training, compensation, incentive, participation, information sharing, and performance evaluation. Moreover, transformational leadership includes of four dimensions, namely; idealized influence/charisma, inspirational motivation, intellectual stimulation, and individualized consideration.

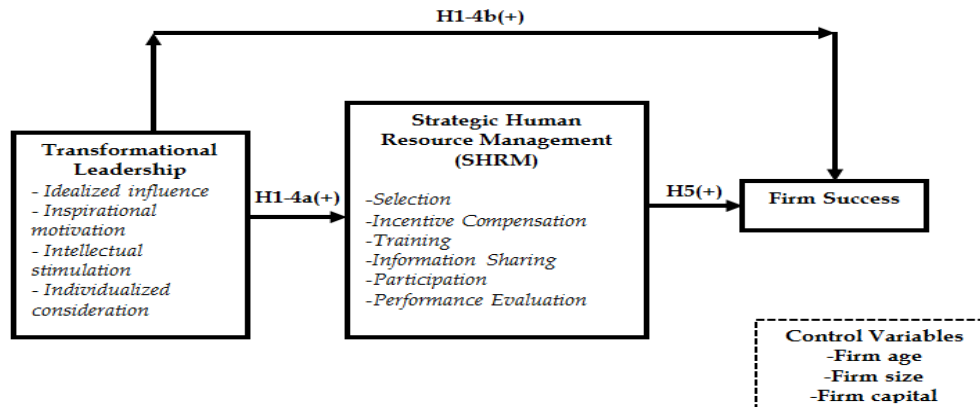


Figure1 : The conceptual model of linking transformational leadership and strategic human resource management on firm performance

### 2.1 Transformational Leadership (TL)

Transformational leadership is a perspective that inspires employees to work towards a vision or goal for their respective organization, which has been created, communicated and modeled by the appropriate leaders (McShane and Von Glinow, 2009).

Transformational leadership theory was strongly influenced by James McGregor Burns in 1978. Burns contrasted transformational leadership with transactional leadership. The transformational leadership model stresses personal charisma, acting as a role model, and being individually considerate and intellectually stimulating towards staffs. It associated in the beneficial way with a wide range of personal and organizational performance (Bass, 1985; Burns, 1978). Transformational leaders lead a positive effect on the performance of staffs of the firm by increasing the cohesiveness, commitment, motivation and trust, which affects the performance results. Moreover, comparative studies reveal that transformational leadership behaviors, when compared to transactional behaviors, have a positive effect on staff's effectiveness in an array of firm environments (Waldman, Ramirez, House, and Puranam, 2001).

#### Transformational Behaviors

The four behaviors of transformational leadership are based on the full range of leadership, which consists of individualized consideration, intellectual stimulation, inspirational motivation, and role and idealized influence.

1. Idealized influence is concerned with the leader creating loyalty, confidence and identifying with the followers. This is done by setting an example of courage and dedication, and making self-sacrifice in order to make benefit to the followers of the organization (Yukl, 2010).

2. Inspirational motivation is a method in which the transformational leader shares his or her vision in order to inspire followers to be more effective and efficient when performing their duties. Transformational leadership know how to use inspirational motivation to communicate the 'can-do' attitude about achieving organizational goals, by providing a purpose for the task and the goals that need to be met. If the stakeholders have a purpose to work towards, they will work harder to reach the set goals.

3. Intellectual stimulation is behavior that increases follower awareness of problems; intellectual stimulation influences followers to view problems from a new facet. The leader should be seen to provide support, encouragement and training to his or her followers (Yukl, 2010).

4. Individualized consideration takes place when the leader delegates projects to stimulate learning experiences, provides coaching and teaching, and shows respect to each follower as an individual. Individualized consideration includes consideration of the followers' needs, providing coaching, mentoring, effective communication, and paying attention to the issues and requirements of the individual people whom the leader leads (Lowe et al., 1996).

Organization can make employee-based competencies through HR practices. HR practices are the most efficient tool that firms can utilize in order to manage the set of social relationships that held by firm employees. Transformational leaders can adopt a long-term perspective rather than focusing specially on the current needs of their followers or themselves, they also focus on future needs; rather than being concerned only with short-term problems and opportunities facing the organization, they also concern themselves with long-term issues; rather than viewing seemingly small issues that are linked to the company as discrete, they view them from a holistic orientation and act upon them accordingly (Dubinsky, Yammarino, Jolson, and Spangler, 1995). Kirkpatrick and Locke (1996) reveal that the content of charismatic communication style (vision and task cues) led to higher performance of both quality and quantity of production. Leader's enunciation of vision emphasizing quality improved followers' attitudes and perception, and that task cues increased followers' understanding of the task as well as creating a certain cerebral invigoration. Baum, Locke, and Kirkpatrick (1998) found the further support for these findings in their research. The authors concluded that vision and vision communication have positive effects upon overall company achievements. Moreover, Jung, Chow, and Wu (2003) showed that there exists a link between transformational leadership and positive organizational innovation. In addition, transformational leadership has significant and positive relationships with both the acceptance of employees and an innovation-supporting firm climate. Then, Jung and Sosik (2002) lead a study to examine whether transformational leadership enhance group effectiveness by empowering followers to perform their job independently from the leader, the authors highlight the importance of cohesiveness in performing collective tasks, and the realignment of followers' values to create a more cooperative group. Results revealed that transformational leadership was positively related to empowerment, group cohesiveness, and group effectiveness. Moreover, collective-efficacy was improved when workers were trusted to do their tasks independently, this, in turn, enhanced group members' perceived group effectiveness. Then, Nandal and Krishnan (2000) suggest that three of the five factors of charismatic leadership were positively related to lack of confusion of roles, which in turn was positively related to staffs individual confidence.

Transformational leadership includes creating a vision and communicating that vision to its followers. Human resource management plays a critical role in this communication process between the leader and the followers. For making the vision to become a reality, the leader has to develop and rely on HR practices that are aligned with the vision. Tactically delivered HR that is aligned with the vision will provide followers with a shared guideline on how to achieve the vision. Moreover, Zhu et al. (2005) revealed that human-capital-enhancing human resource management fully conciliated the relations between CEO transformational leadership and subjective assessment of organizational performance. Then, Sarros, Cooper, and Santora (2008) suggested that a competitive, performance-oriented organizational culture moderates the relationship between transformational leadership and the environment for enhanced firm innovation.

As a result, this research implies that transformational leadership will have a positive effect on strategic human resource management and firm success. Thus, we hypothesize the relationship as follows:

**Hypothesis 1: Idealized influence is positively related to (a) strategic human resource management, (b) firm success.**

**Hypothesis 2: Inspirational motivation is positively related to (a) strategic human resource management, (b) firm success.**

**Hypothesis 3: Intellectual stimulation is positively related to (a) strategic human resource management, (b) firm success.**

**Hypothesis 4: Individualized consideration is positively related to (a) strategic human resource management, (b) firm success.**

## **2.2 Strategic Human Resource Management (SHRM)**

The function of the HR department has changed a lot of late. HR professionals have come to be seen as important business contributors. They are expected to enrich the business strategy through their dominion of expertise (Conner and Ulrich, 1996). It is important that the HR strategy of the organization is coordinated accordingly to ensure not only the firm's success, but also its maintenance. The inclusion of a HR strategy into a business strategy provides good foundations for enabling the HR function to support and administer the strategic plan to obtain a competitive advantage. This design creates an opportunity for the maximization of human capital, and a reduction of inefficient labor and financial investment, thus eventually maximizing overall profitability (Collins, and Clark, 2003; Ramlall 2003). Organizations that strategically coordinate their HR and firm strategies are more profitable. For HR strategies to increase profits, they have to be documented and integrated into the business strategy, they have to include people practices and practices to distribute the facets of the business strategy throughout the firm. In addition to this, the HR department must be correctly perceived as a part of the leadership team that can positively influence the business (Steven, Anthony, Mark, and Brian, 1999).

Therefore, it is likely that strategic human resource management has a positive effect on firm success. Hence, the hypothesis is proposed as follows:

**Hypothesis 5: Strategic human resource management is positively related to firm success.**

## **2.3 Firm Success**

Firm success in this research refers to the acceptance of the customers opinion of a firm as being a professional business, the continuous increase of new customers, the continuous growth of the operation as a whole, the reduction of staff turnover rate, and the continuous growth of net profit (Schutjens and Wever, 2000).

### 3. Research Methods

#### 3.1 Sample Selection and Data Collection Procedure

This study selects from Toyota's dealer businesses in Thailand as the population and sample amount 400 businesses. The database is drawn from the Toyota Motor Thailand database in March, 2015. A mail survey procedure via the questionnaire was used for data collection. The key participants in this study were chief executive officers (CEO), presidents/managing directors /or executive directors. The questionnaire was sent to Toyota's dealer in Thailand. With regard to the questionnaire mailing, the valid mailing was 400 surveys; the completed and usable surveys were 106.

Finally, to test potential and non-response bias and to detect and consider possible problems with non-response errors, the assessment and investigation of non-response-bias was centered on a comparison of first and second wave data as recommended by Armstrong and Overton (1977). The t-test statistics were used to test the difference between early and late responses in various firm characteristics which consist of the business type, location of firm, capital investment or operation capital, average sales revenues per year; the results did not find any significant differences between the two groups. Thus, non-response bias does not pose a significant problem for this study.

#### 3.2 Measurements

In this study, all constructs in the model are measured with multi-item scales. Each of these variables were measured on five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), except demographic and control variables. The measurements of dependent, independent, mediating, and control variables are clarified as follows:

*Transformational Leadership (TL)* is main construct of this study. It can be defined as the person who can motivate people for working more. This person can build the confidence of their staff. Moreover, this leadership tries to build the success of their colleagues or even customers. They can bring change, innovation and the ability of the employee of the organization as well as to be the prototype for others to follow, both in work and personal life (Burns, 1978; Bass, 1997). It is measured by sixteen-item scale which is classified into four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

*Idealized Influence (II)* is measured by four-item scale, and it is defined as the leader creating loyalty, confidence and identifying with the followers. This is done by setting an example of courage and dedication, and making self-sacrifice in order to benefit the followers of the organization (Yukl, 2010).

*Inspirational Motivation (IM)* is measured by four-item scale, and it is defined as a method in which the transformational leader shares his or her vision in order to inspire followers to be more effective and efficient when performing their duties. Transformational leaders know how to use inspirational motivation to communicate the 'can-do' attitude about achieving organizational goals, by providing a purpose for the task and the goals that need to be met. If the stakeholders have a purpose to work towards, they will work harder to achieve the set goals (Yukl, 2010).

*Intellectual Stimulation (IS)* is measured by four-item scale, and it is defined as behavior that increases follower awareness of problems; intellectual stimulation influences followers to view problems from a new perspective. The leader should be seen to provide support, encouragement and training to his or her followers (Yukl, 2010).

*Individualized Consideration (IC)* is measured by four-item scale, and it is defined as taking place when the leader delegates projects to stimulate learning experiences, provides coaching and teaching, and shows respect to each follower as an individual. Individualized consideration

includes consideration of the followers' needs, providing coaching, mentoring, effective communication, and paying attention to the issues and requirements of the individual people whom the leader leads (Lowe et al., 1996).

*Strategic Human Resource Management (SHRM)* is measured by six-item scale, and it is defined as the link between human resource management with the strategic objectives of the business. Strategic human resource management will improve their performance and encourage innovation and change to the organization (Truss and Gratton, 1994). In the perspective of strategic human resource management, the staff resource is strategic and essential tool to enable organizations with better performance (Purcell, 1993; Bennett et al, 1998).

*Firm Success (FS)* is measured by five-item scale, and it is defined as the success of business operations. This scale measure is adopted from (Pongpearchan and Mumi, 2012).

*Firm Size (FSi)* affect the ability to redefine, adjust, or renew firm's strategy (Baden-Fuller and Volberda, 1997). Large firm tend to rapidly renew firm's strategy than those small ones (Jansen et al., 2005). It was measured by the number of employees in a currently registered full time of the firm.

*Firm Age or Firm Experience (FA)* is measured by the number of the years that the firm has operated in businesses (Kotabe et al., 2011; Patel et al., 2012). Traditional firms have experience in monitoring environmental changes faster than new firms and more appropriate to improve creative and innovative products that create a competitive advantage and firm survival. Mature firms tend to renew strategy or renew organization more than those younger firms (Baden-Fuller and Volberda, 1997).

*Firm Capital (FC)* is measured as the money or asset on investment operation in organization. According to Leiblein et al. (2002), large firm may also have greater market power or positional advantages compared to their smaller rivals, and larger firms often have superior financial.

### 3.3 Methods

Factor analysis was firstly utilized to assess the underlying relationships of a large number of items and to determine whether they can be reduced to a smaller set of factors. The factor analysis was conducted separately on each set of the items representing a particular scale due to limited observations. With respect to the exploratory factory analysis, this analysis has a high potential to inflate the component loadings. Thus, a higher rule-of-thumb, a cut-off value of 0.40, was adopted (Nunnally and Bernstein, 1994). All factor loadings are greater than the 0.40 cut-off and are statistically significant. The reliability of the measurements was evaluated by Cronbach alpha coefficients. In the scale reliability, Cronbach alpha coefficients are greater than 0.70 (Nunnally and Bernstein, 1994). The scales of all measures appear to produce internally consistent results; thus, these measures are deemed appropriate for further analysis because they express an accepted validity and reliability in this study. Table 1 presents the results for both factor loadings and Cronbach alpha for multiple-item scales used in this study.

Items	Factor Loadings	Cronbach Alpha
Idealized Influence (II)	0.740-0.892	0.858
Inspirational Motivation (IM)	0.799-0.910	0.860
Intellectual Stimulation (IS)	0.775-0.929	0.870
Individualized Consideration (IC)	0.784-0.870	0.834
Strategic Human Resource Management (SHRM)	0.609-0.906	0.876
Firm Success (FS)	0.598-0.889	0.854

Table 1 : Results of Measurement Validation



### 3.4 Statistical Techniques

The ordinary least squares (OLS) regression analysis is used to test and examine all hypotheses following the conceptual model. Then, the aforementioned variables play significant roles in explaining the research relationships. Because all dependent variables, independent variables, moderating variable, and the control variables in this study were neither nominal data nor categorical data, OLS is an appropriate method for examining the hypothesized relationships (Hair, 2010). With the interest of understanding the relationships in this study, the research model of these relationships is depicted as follows:

$$\text{Equation 1: } SHRM = \beta_{01} + \beta_{1II} + \beta_{2IM} + \beta_{3IS} + \beta_{4IC} + \beta_{5FA} + \beta_{6FSi} + \beta_{7FC} + \varepsilon_1$$

$$\text{Equation 2: } FS = \beta_{02} + \beta_{8II} + \beta_{9IM} + \beta_{10IS} + \beta_{11IC} + \beta_{12FA} + \beta_{13FSi} + \beta_{14FC} + \varepsilon_2$$

$$\text{Equation 3: } FS = \beta_{03} + \beta_{15SHRM} + \beta_{16FA} + \beta_{17FSi} + \beta_{18FC} + \varepsilon_3$$

### 4. Results and Discussion

Table 2 exhibits the descriptive statistics and correlation matrix for all variables. With respect to potential problems relating of multicollinearity, variance inflation factors (VIFs) were used to grant information on the extent to which non-orthogonality among independent variables inflates standard errors. The VIFs range from 1.007 to 4.081, well below the cut-off value of 10 recommended by Neter et al. (1985), meaning that the independent variables are not correlated with each other. Hence, there are no substantial multicollinearity problems confronted in this study.

	II	IM	IS	IC	SHRM	FS	FSi	FC	FA
Mean	4.448	4.302	4.123	3.955	4.263	3.942	0.620	0.510	0.710
S.D	0.588	0.627	0.673	0.704	0.606	0.672	0.487	0.502	0.457
II									
IM	.781**								
IS	.587**	.735**							
IC	.052	.049	.066						
SHRM	.565**	.599**	.693**	-.056					
FS	.318**	.441**	.419**	.005	.332**				
FSi	.000	.175	.032	.021	-.094	-.029			
FC	-.034	.021	-.063	.014	-.177	-.065	.131		
FA	.298**	.207*	.032	-.023	.113	.227*	.141	-.009	

\*p<0.05, \*\*p<0.01

Table 2: Descriptive Statistics and Correlation Matrix

Independent Variables	Dependent Variables		
	Model 1 SHRM	Model 2 FS	Model 3 FS
II	0.164 (0.114)	-0.202 (0.147)	
IM	0.114 (0.135)	0.408** (0.175)	
IS	0.514*** (0.102)	0.233* (0.131)	
IC	-0.099 (0.067)	-0.012 (0.087)	
SHRM			0.306*** (0.094)
FSi	-0.241 (0.147)	-0.271 (0.190)	-0.056 (0.193)
FC	-0.248 (0.136)	-0.092 (0.175)	-0.011 (0.187)
FA	0.081 (0.158)	0.466 (0.204)	0.429** (0.205)
Adjust R <sup>2</sup>	0.528	0.216	0.113

\*p<0.1, \*\*p<0.05, \*\*\*p<0.01

Table 3 : Results of regression analysis

Table 3 presents the results of OLS regression analysis of the relationships among four dimensions of transformational leadership, strategic human resource management, and firm success. Only one dimension of transformational leadership that is intellectual stimulation has significant positive effect on strategic human resource management ( $b_3=0.547$ ,  $p<0.01$ ). **Thus, Hypothesis 3a is supported whereas, Hypothesis 1a, 2a and 4a are not supported.** The result of this study consistent with Loshali and Krishnan (2013) revealed that transformational leadership was significantly positively related to strategic HR. However interestingly in the context of Toyota's dealer of Thailand, only one dimension of transformational leadership as intellectual stimulation influence with the capability of strategic human resource management. Furthermore in the relation of transformational leadership and firm success, inspirational motivation and intellectual stimulation has significant positive effect on firm success ( $b_9=0.408$ ,  $p<0.05$ ;  $b_{10}=0.233$ ,  $p<0.10$ ). The consistent with the study of Loshali and Krishnan (2013) find that transformational leadership have positive effect on firm success. **Hence, Hypothesis 2b and 3b is supported whereas, Hypothesis 1b and 4b are not supported.** However, these results reveal that only two dimensions of TL as inspirational motivation and intellectual stimulation effect on firm success in the context of Toyota's dealer in Thailand.

Hypothesis 5 proposed strategic human resource management would be positively associated with firm success. As shown in Table 3, indicates that strategic human resource management is positively and significantly related to firm success ( $b_{15}=0.306$ ,  $p<0.01$ ). **Hence, Hypothesis 5 is supported.** According with Loshali and Krishnan (2013), and consistent with Hamid (2013) provided that strategic human resource management affect the firm success.

## 5. Contributions and Directions for Future Research

### 5.1 Theoretical Contributions and Directions for Future Research

This study proposes the escalation understanding of relationship among the four dimensions of transformational leadership and firm success via strategic human resource management. For progress the field theoretically, this research attempted to concentration on the above-mentioned relationships of Toyota's dealer businesses in Thailand. Therefore, the need for further research is obviously seen that should shift to a variety of sample from the other sectors in order to obtain a precise and reliability of this framework offering. Interestingly, the contribution of theoretical was spread the extent of the dimension of transformational leadership and empirically testing with consequence constructs which distinctive aspect further previous study.

### 5.2 Managerial Contributions

This research also helps administrators justify and identify the key components that may be more critical in the competitive market. From a managerial and practical contribution, many important insights can be received from this research. This research can facilitate CEO's or the general executive, particularly in Toyota's dealer businesses to perceive how their organization can complete strategic human resource management by using transformational leadership and achieve firm success more than their competitors. Extension competitiveness of organization is becoming a basis for firm survival. Hence, transformational leadership and strategic human resource management had become an important topic for executive in business sector. Consistence to the results of this study, show that transformational leadership in the dimension of intellectual stimulation has significant relate to strategic human resource management and leading to the success of firm. Moreover, intellectual stimulation and inspirational motivation still have has significant relate to firm success by themselves also. This empirical study helps to formulate solutions in business problems that provide the basis of survival and successful for

organization. Therefore, to maximize the benefit of firm's strategy, CEO's should try these resources to boost effectiveness and create new opportunities in the competitive advantage.

## 6. Conclusion

This paper discusses transformational leadership in the perspective of Toyota's dealer businesses in Thailand. Coping with an uncertain environment may incur from the consequences of the political situation in the early months of the year, and the first-car project of the Thai government having finished. According to, these the external factor are direct impact on organization survival. The aim of this research indicates that to study the relationships among four dimensions of transformational leadership and firm success via strategic human resource management. The model testing is collected data from mail survey for 400 informants of Toyota's dealer businesses in Thailand. Interesting, this study finds that intellectual stimulation has significant positive effect on strategic human resource management. Furthermore, intellectual stimulation and inspirational motivation still have has significant relate to firm success by themselves also. Then, strategic human resource management has significant positive effect on firm success respectively.

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## Economic globalization: role of inward and outward FDI with economic growth - evidence from Malaysia

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### Keywords

Outward FDI, inward FDI, economic growth, globalization, ARDL, Malaysia

### Abstract

*When a nation that links itself to the global market, this means that the nation would embark itself in the path towards globalization. Global markets offer greater opportunity for domestic firms to tap into larger markets around the world. This translates the possibility of having more access to more capital flow, technology, cheaper imports, and larger exports. One of the ways a domestic firm gets foreign capital, would be through Foreign Direct Investments (FDI). This study aims to look at Malaysia's inward and outward FDI and determine their relationship with economic growth. Annual data covers over the period of 1984 to 2013 and tested based on the autoregressive distributed lag (ARDL) model. The results show that there is a positive long-run relationship between inward FDI with economic growth. It was noted that outward FDI have an indirect relationship with economic growth. There is unidirectional granger causality between them as well as between inward and outward FDI.*

### Introduction

According to Milanović (2002), World Bank had defined globalization as “freedom and ability of individual and firms to initiate voluntary economic transactions with residents of other countries.” Gordon (2006) defined globalization as an economic and political interdependence on a worldwide scale. Almsafir (2002) defined globalization as a process of making world economy dominated by capitalist models as well as a process whereby an increased portion of economic or other activity is carried out across national borders. It is thus noted that a nation that links itself to the global market would embarked itself in the path towards globalization. Global markets offer greater opportunity for domestic firms to tap into larger markets around the world. This translates the possibility of having more access to more capital flow (finance), technology, cheaper imports, larger exports (good and services), and labor.

The country of interest (Malaysia) in this study also is one of the developing countries that area recipient of inward FDI and also the source of outward FDI. Oguchi, Amdzah, Bakar, Abidin, and Shafii (2002) stated that during the 1970s and 1990s, FDI helped many Asian countries achieve economic growth. Malaysia was one of the countries that actively accepted foreign investment to advance its economic growth during that time.

According to (Goh and Wong, 2011), main reasons cited for Malaysia's outward FDI is to overcome local resource limitation and to search for new markets. Decisions to invest abroad are fueled by higher profit opportunities of the host market and also help make Malaysian firms to be part of the global production network, while concurrently developing themselves into regional or global players. Based on United Nations Conference on Trade and Development (UNCTAD)'s statistical databases, Malaysia's outward stock increase from USD 753 million in 1990, to USD 96,896 million in 2010 reflect that the reasons as good motivators to gain outward FDI.

According to Ariff (2004), Malaysia is the fourth most open economy in the world, with its Gross Domestic Product (GDP) mainly made up of imports and exports. FDI forms the backbone of the Malaysian economy. This nation embarked on a journey towards economic

openness which paves the way to a rapid rise of economic growth and development. In 2014, according to World Bank, Malaysia now exceeds the US\$ 11,000 mark, more than twice the increase in value compared to 2004, when it just exceeds the US\$ 4,000 mark.

This study is to look at Malaysia's inward and outward FDI and determine their relationship with economic growth.

### Literature Review

As shared, there are a lot of literature that looks at the individual relationship of inward FDI and outward FDI with economic growth. This study concentrates on the interaction of both and their effect on economic growth. The dynamics between both variables are looked at individually. Econometric studies and analysis were also conducted in many of these studies.

One of the ways a domestic firm gets foreign capital, would be through Foreign Direct Investments (FDI). FDI is defined by the International Monetary Fund (IMF)/ Organization for Economic Co-operation and Development (OECD) as investments that involve a long-term relationship reflecting a long interest of a resident entity in one economy (direct investor) in another entity in a foreign economy (IMF/OECD, 2008). FDI has long been established as an economic globalization indicator, as it is one of the means to integrate the domestic economy with the global economy, as such, increasing the integration of economies around the world (IMF, 2008).

IMF/OECD (2008), defines that inward FDI is foreign direct investment by a foreign firm establishing a facility within the domestic country. While, outward FDI is defined the investment located within the domestic country that is acquired by a foreign owner (IMF/OECD, 2008). Inward FDI and outward FDI, despite its conflicting contributing factors, have a similar end in mind. Countries embarked on the attracting inward FDI or supporting firms towards outward FDI in the bid to ensure economic growth.

The path of a developing country begins as a recipient of FDI. And as the country enjoys economic growth brought upon by inward FDI, would then become a net source for FDI. As such, in the long run, increased outward FDI is both a cause and a consequence of economic growth (Stal and Cuervo-Cazurra, 2011; Rugman, 2010; Herzer 2010; Zhang and Daly, 2010). As according to Saad, Noor and Nor (2014), further supporting this path, that it should be noted that, GDP, inward FDI, productivity levels, exchange rate, export levels and patent, in the context of Malaysia are the major push factors for its outward FDI. Outward FDI is said to be one of the measures to indicate the performance and capability of developing countries enterprises.

Inward FDI provides a means for developing countries to transform their economy through privatization, economic liberalization, trade and market expansion, new financial organization formation, enhanced institutional quality, creation of employment opportunities, increased communication, national income increase, improved technological capitals and human labor forces and competition through transfer of technology and managerial know-how. All these would result in the integration of the domestic economy with the global economy which is a factor to measure the globalization (Aizenman and Noy, 2005; Hailu, 2010; Adams, 2008; Moghaddam and Redzuan, 2012; Almfraji, Almsafir, and Yao, 2014; Almsafir, Nor, and Al-Shibami, 2011; Meon and Sekkat, 2007).

The study by Karimi and Yusop (2009) looks at the causal relationship between FDI and economic growth. The Toda-Yamamoto test and bounds testing (ARDL) were used for a time series data from a period of 1970- 2005 for Malaysia. This study found that there is no evidence of bi-directional causality and long run relationship between FDI and economic growth. This indicates that FDI has an indirect effect on economic growth in Malaysia.

A study by Desai, Foley and Hines Jr. (2005), using time-series data for US firms found a positive relationship between domestic and foreign investments with economic growth, while Navaretti, Venables and Castellani (2004) found that outward investment increases domestic output and productivity growth for Italian firms. Some of the observed ways on how Outward FDI strengthens economic activities domestically would be through increasing output, competitiveness, home employment, skill of labour, efficiency, and profit. Lee (2010) also supported, through the standard Granger causality tests that increased outward FDI leads to higher GDP per capita. It is however noted, for Singapore that with this higher GDP per capita would actually lead to a decrease in outward FDI.

Other literature looks at the relationship of FDI with other factors such as political regime such as Busse and Hefeker (2007), indicated that government stability, absence of internal conflict, and basic democratic rights are significant determinants of inward FDI. This means that 'good institutions' almost always increase the amount of FDI, however, evidence to show that FDI has positive effects for the host countries is weak. This result is echoed by Hanson, Mataloni, and Slaughter (2001).

Farshid, Ali, and Gholamhosein, (2009) looked into the effects of FDI and trade on East Asia countries such as China, Korea, Malaysia, Philippines and Thailand. They found that with an upgrade of existing knowledge level through upgrades of the human capital in terms of labor training, China and Korea were able to have a higher impact on economic growth from trade and FDI compared to the others in the study. Besides that, macroeconomic stability was found to be essential in order for the impact of FDI to be translated on economic growth (Jallab and Sandretto, 2008).

Inward FDI and human capital development has been noted to strongly contribute to the economic growth of the host country. It is noted though the technology effects of these inward FDIs was not able to be realized since they were not combined efficiently with the human capital to contribute enough to the economic growth. As such, human capital in numbers are not sufficient enough to contribute to economic growth, more efforts in development this human capital is required to attract and accommodate the current inward FDI. Increased inward FDI would allow the openness of the economy and the foreign exchange environment to move favorably (Fadhil and Almsafir, 2015).

This indicated that host countries must be ready for this upgrade in order for the benefits to be felt amongst its people. FDI may pave the way for a country to develop further in technology and knowledge that are not readily available to domestic investors, and in turn promotes growth in productivity through the economy, but it takes a well-educated population to understand and spread the benefits of these new innovations to the whole economy. These findings are echoed in Borensztein et al., (1998); Almsafir, Latif, and Bekhet (2011).

It is well noted that developed countries do receive inward FDI, though mostly from other developed countries. However, according to Acaravci and Ozturk (2012), the effect that FDI flows provide the host country with higher productivity and economic growth, is more obviously seen in developing countries. This observation was explained through a study by Rugman (2010) that concluded that through Multinational Enterprises (MNEs), a developing country would have the best way to integrate into the world economy. Through inward FDI, domestic firms in developing countries would learn how to serve more demanding consumers and eventually reach the capability level that would enable them to be multinational company (MNC) and start investing abroad. This is echoed by Stal and Cuervo-Cazurra, (2011).

Traditionally, outward FDI is from developed countries such as the US, UK or Japan. However, it is noted that these days, developing countries are becoming an important source of outward FDI in the world, as oppose to the past when this is rare (Pradhan, 2010; Holtbrügge

and Kreppel, 2012; Herzer, 2011) studied the effect of companies from developing countries investing in other developing countries and found that these developing countries (host/ origin) had, on an average, experience a positive long-run effect on their domestic productivity of FDI from the developed countries.

### Data

The data consist of Malaysia's annual data from 1984 to 2013 which are retrieved from UNCTAD and World Development Indicators (WDI) Online. The three variables are inward FDI, outward FDI and economic growth, where GDP is the proxy for the Economic Growth of Malaysia. IFDI is inward FDI flows, OFDI is outward FDI flows and all variables are transformed to the (Log) form to standardize the variables with each other. Table 1 provides the description of the variables.

Variable	Description	Unit of measurement	Source
GDP	Proxy for Economic Growth. This measures the sum of the value of Malaysia's goods and services including taxes and excluding any subsidies not included in the value of the products	Million USD	World Development Indicators (WDI) Online World Bank Database
IFDI	Measures the inward Net Foreign Direct Investment for Malaysia	Million USD	UNCTAD
OFDI	Measures the outward Net Foreign Direct Investment for Malaysia	Million USD	UNCTAD

Table 1 Summary of Dataset (1984 to 2013)

### Methodology

In order to examine the log run relationship and causality relationship between the three variables (inward FDI, outward FDI and economic growth) formulated as the following:

$$GDP = \mu + \beta_1 IFDI + \beta_2 OFDI + \varepsilon_t \quad (1)$$

In (1), where,  $\mu$  is the intercept;  $\beta_i$  ( $i = 1, \text{ and } 2$ ) are the causality's coefficient of independent variables, ( $\varepsilon_t$ ) is the error term. The expected coefficient sign can be positive or negative.

Before this, the data was tested for stationarity for each of the variable to avoid a spurious regression result. Unit root test is used to determine the stationarity of each of the variables. It should be noted that if the time series data are not constant, this would reflect non truth results of regression (Engle and Granger, 1987). The two most popular tests used in this study are; Augmented Dickey-Fuller (ADF) test (Dickey and Fuller, 1979) and Phillips-Perron (P.P) test (Phillips and Perron, 1988). These tests would check if the variables are stationary at level, first difference or mutually integrated but not more than first difference. It is noted that if any variable in the model is stationary at more than first difference, then ARDL technique would not be able to be used for that model.

When all of the variables are found to be independent from unit root and allow us to proceed with co-integration test based on Pesaran, Shin and Smith (2001). This co-integration test examines the long-run co-integrating relationship among variables based on the F-test. The tabulated critical values of F-test classified into two critical values, the lower critical bound

(LCB) and the upper critical bound (UCB). The purpose of conducting co-integration test is to examine the existence of long-run equilibrium relationship between variables in the model.

The commonly used co-integration tests, such as the Engle and Granger (1987) and Johansen and Juselius (1990) approaches, require the analyzed variables to be non-stationary with the same order of integration. The bounds testing approach to co-integration based on autoregressive distributed lag (ARDL) framework developed by Pesaran et al. (2001) was selected for this study mainly due to the small sample size of 29 observations.

One of the main advantages of the ARDL model is that it can be applied irrespective of whether the variable is  $I(0)$ ,  $I(1)$  or fractionally co-integrated. The other advantage is that the model takes sufficient number of lags to capture the data generating process in a dynamic framework of general-to-specific modeling framework. Furthermore, the error correction model (ECM) can be derived from ARDL through a simple linear transformation. ECM integrates short-run adjustments with long-run equilibrium without losing long-run information.

Another advantage of ARDL approach is that it is suitable to analyse data with as small sample size as that in this analysis. Pesaran (2001) showed that OLS estimators of the short-run parameters are consistent and the long-run coefficients in ARDL approach are super-consistent in small sample size. In current study ARDL bounds testing approach is employed to examine the long-run relationship among research variables.

The choice of the most appropriate model would be the ARDL model approach to fix the problem of testing the existence of a level relationship between the variables based on standard F- and T- statistics test used to test the significance level of the variables in a univariate equilibrium correction mechanism. In summary, the reason why this model is chosen is as follows. Under this model, it is not necessary to examine the non stationary property. It also has the ability to determine co-integration for small sample size, which is suited for this study as the sample is small, and allows variables with different optimal lags (Pesaran et al., 2001).

The bounds test investigates the existence of a long-run relationship between the variables with the following unrestricted error correction models:

The ARDL model is displayed by the following equation:

$$\Delta GDP_t = \mu_1 + \sum_{j=1}^k \beta_{11} \Delta GDP_{t-j} + \sum_{j=0}^k \beta_{12} \Delta IFDI_{t-j} + \sum_{j=0}^k \beta_{13} \Delta OFDI_{t-j} + n_{11} GDP_{t-1} + n_{12} IFDI_{t-1} + n_{13} OFDI_{t-1} + \lambda_1 ECT_{t-1} + \varepsilon_{1t} \quad (2)$$

$$\Delta IFDI_t = \mu_2 + \sum_{j=1}^k \beta_{21} \Delta IFDI_{t-j} + \sum_{j=0}^k \beta_{22} \Delta GDP_{t-j} + \sum_{j=0}^k \beta_{23} \Delta OFDI_{t-j} + n_{21} IFDI_{t-1} + n_{22} GDP_{t-1} + n_{23} OFDI_{t-1} + \lambda_2 ECT_{t-1} + \varepsilon_{2t} \quad (3)$$

$$\Delta OFDI_t = \mu_3 + \sum_{j=1}^k \beta_{31} \Delta OFDI_{t-j} + \sum_{j=0}^k \beta_{32} \Delta IFDI_{t-j} + \sum_{j=0}^k \beta_{33} \Delta GDP_{t-j} + n_{31} OFDI_{t-1} + n_{32} IFDI_{t-1} + n_{33} GDP_{t-1} + \lambda_3 ECT_{t-1} + \varepsilon_{3t} \quad (4)$$

In (2), (3), (4), where,  $\mu_i$  ( $i = 1, 2, 3$ ) denotes intercepts;  $\beta_{ij}$  ( $i, j = 1, 2, 3$ ) represents the coefficients of the variables which are used to test the short run relationship among the



variables;  $\alpha_{ij}$ s ( $i,j=1, 2, 3$ ) which represents the long run coefficient among the variables;  $\lambda_{is}$  ( $i=1, 2, 3$ ) represents the coefficients of the error correction terms ( $ECT_{t-1}$ ); which are used to test the long-run causality relationship among the variables;  $\varepsilon_{is}$  ( $i=1, 2, 3$ ) represent the error terms.

The Granger causality/ Block erogeneity Wald test is applied to a time series to indicate the causality. This test detects if the lags of a variable can granger-cause another variable in the VAR system. The null hypothesis is that all lags of one variable can be excluded the model (Enders, 2003). In this study, this test would help to answer if all the lags of inward and outward FDI be excluded from the GDP model. Rejection of the null hypothesis means that if all lags of inward and outward FDI cannot be excluded from the GDP model, then GDP is an endogenous variable and there is causality of inward and outward FDI on GDP.

## Results and Discussion

### Unit Root Test Results

The results of the Augmented Dickey-Fuller (ADF) test and Phillips-Perron (P.P) test are presented in table 2. The variables are tested at level  $I(0)$  and first difference  $I(1)$  with the inclusion of only intercept, followed by another with intercept and trend.

Variable	Test	Level		First difference	
		Intercept	Trend and intercept	Intercept	Trend and intercept
OFDI	ADF	-1.174885	-3.118917	-6.981205***	-6.847873***
	PP	-0.993274	-3.148168	-6.994906***	-6.860821***
IFDI	ADF	-2.445026	-3.510942*	-7.532552***	-7.373001***
	PP	-2.266837	-3.488753*	-12.51158***	-12.13319***
GDP	ADF	0.208816	-2.448996	-4.719406***	-4.595188***
	PP	0.154645	-2.613223	-4.719360***	-4.562115***

**Table 2 Unit Root Test (ADF and PP)**

Note: \*\*\*, \*\*, \* denote 1%, 5%, 10% significance level, respectively. The lag length selection in ADF test is based on Schwarz Info Criterion (SIC) while PP test is based on Newey-West Bandwidth. Both ADF and PP tests examines the null hypothesis of unit root against stationarity.

The ADF and PP test results concluded that all the variables (OFDI, IFDI, GDP) are stationary at  $I(1)$ . However, while the results show that at  $I(0)$  IFDI are stationary in both tests ADF and PP at 10% significant level. These results confirm that all the variables were consistently stationary at  $I(0)$  and/or  $I(1)$  and none of them exceed  $I(1)$ . Thus, these results suggested that the null hypothesis of unit root for all the variables testes in both ADF and PP tests are rejected and it is possible to proceed to the next test.

### Lag Length Criteria Results

Table 3 shows the results of lag length for GDP model which is at 1 lag. This result depends on LR, AIC and HQ criteria as suggested by Engle and Granger (1987).

Source: output of Eviews 9.0 econometric software

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-29.31456	NA	0.510420	2.165326	2.212905	2.179871
1	21.39184	94.16903*	0.014658*	-1.385131*	-1.289974*	-1.356041*
2	21.60962	0.388889	0.015509	-1.329258	-1.186522	-1.285622

**Table 3 Lag Length Criteria Results**

\* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

### **Bounds F- statistics Test**

Since the variables in this study are stationary, it is then possible to move to the next step – bounds co-integration F-statistics test as suggested by Pesaran et al. (2001) to test the null hypothesis of no co-integration among the variables.

The decision role is based on compared F-statistic test with the critical value tabulated by Pesaran et al. (2001). Moreover, if the F-test statistic exceeds the upper critical value, the null hypothesis of no co-integration can be rejected regardless of whether the underlying orders of integration of the variables are  $I(0)$  or  $I(1)$ . Similarly, if the F-test statistic falls below the lower critical value, the null hypothesis cannot be rejected. However, if the F-test statistic falls between  $I(0)$  and  $I(1)$  the result is inconclusive whether to accept or reject. Table 4 provides the results of calculated and critical values of bound F-statistics test for GDP model.

Source: output of Eviews 9.0 econometric software

Model	F-statistics	Bound Critical Values			Decision
		1%	5%	10%	
		$I(0), I(1)$	$I(0), I(1)$	$I(0), I(1)$	
GDP	0.358	5.15, 6.36	3.79, 4.85	3.17, 4.14	No co-integration
IFDI	5.349	5.15, 6.36	3.79, 4.85	3.17, 4.14	Co-integration
OFDI	2.973	5.15, 6.36	3.79, 4.85	3.17, 4.14	No co-integration

**Table 4 Bounds F-Statistics Test Results**

### **Long Run Relationship Results**

Table 5 shows the results of long run relationship among the variables. The existence of co-integration among variables warrants the estimation of matrix by ARDL approach to get the long-run coefficients. This shows the relationship of GDP with the other independent variables. Example, a 1% increase in GDP would cause an increase in IFDI by 0.54 % in the long run. IFDI has a significant and positive relationship with GDP while OFDI has an indirect relationship with GDP in the long run.

Source: output of Eviews 9.0 econometric software

Dependent variable is GDP			
Regressor	Coefficient	P-value	T-value
IFDI	0.536903	0.0640	1.937825
OFDI	0.033961	0.2560	1.162552
C	9.078983	0.0384	2.186212

**Table 3 Long Run Coefficients**

### **ECT<sub>t-1</sub> Coefficient Results**

The results of the ECT<sub>t-1</sub> estimation were based on the ARDL approach. If the error correction term is negative and significant, this would mean that the long run equilibrium among the variables is achieved (Pesaran et al., 2001). Table 6 indicates the error correction term for the model.

Dependent variable is GDP			
Regressor	Coefficient	P-value	T-value
dIFDI	0.079284	0.0040	3.165194
dOFDI	0.229980	0.0806	1.821154
ecm (-1)	-0.147669	0.0321	-2.270022

**Table 4 Error Correction Terms Coefficients**

The  $ECT_{t-1}$  result of this study model achieved the appropriate negative signs as stated for this test and is significant at 5% level. This value of the  $ECT_{t-1}$  coefficient implies the relativity speed of the model achieving the long run equilibrium. This means that the  $ECT_{t-1}$  at a value of -0.14 means that the model is corrected from the short run towards long run equilibrium at about 14% for each period.

This means that the short run relationship between the independent variables (OFDI and IFDI) and economic growth (GDP) would move to the long run equilibrium by 7 years.

### Granger Causality Results

Engle and Granger (1987) suggested that if the co-integration exists among the variables then there must be either unidirectional, bidirectional or neutral causality among them. Table 7 indicates granger causality results of the econometric model of this study.

Dependent variable	Excluded	Chi- sq value	df	P-value
GDP	IFDI	0.020321	1	0.8866
	OFDI	0.97222	1	0.3241
	All	1.032598	2	0.5967
IFDI	GDP	9.074468	1	0.0026
	OFDI	4.181763	1	0.0409
	All	9.877368	2	0.0072
OFDI	GDP	12.39881	1	0.0004
	IFDI	0.655759	1	0.4181
	All	12.49956	2	0.0019

**Table 5 VAR Granger Causality/Block Exogeneity Wald Tests**

The results of the VAR Granger Causality/Block Exogeneity Wald test suggests that out of the three variables (GDP, IFDI, OFDI), GDP is exogenous, while the other two are not exogenous, because the P-values of the joint test for each equation of those variables are 0.5967, 0.0072 and 0.0019, respectively. The results also suggest that GDP has a unidirectional relationship with OFDI and IFDI, while OFDI has a unidirectional relationship with IFDI.

### Conclusion

This study discussed the association between inward and outward FDI with the economic growth of Malaysia for year 1984 to 2013. The long-run dynamic interactions between inward and outward FDI and GDP are investigated with the co-integration and Granger causality analyses. In addition, the granger causality tests indicate that GDP has a unidirectional relationship with outward FDI and inward FDI, while outward FDI has a unidirectional relationship with inward FDI. The error correction term coefficient is at 0.14, this means that the short run relationship between inward FDI and economic growth (GDP) would move to the long run equilibrium by 7 years. The findings reveal that both inward FDI is positively and

significantly affect GDP in the long run, while and outward FDI has an indirect relationship with GDP in the long run. Therefore, we can conclude that inward FDI benefits the Malaysian economy as a whole by boosting the GDP which in turn will lead to a further increase in outward FDI. It is noted that based on the results, that inward FDI would cause an increase in GDP, while outward FDI would not have a direct effect of GDP.

### Future of FDI in Malaysia

As Malaysia embarks itself towards the path of economic growth via foreign direct investments, it would also move towards globalization as it exposes itself to the global market. It would be good to look at other factors that would contribute to higher foreign direct investments for Malaysia's policymakers to focus on for its future.

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# The Research of Motivation for Word-of-Mouth: Based on the Self-Determination Theory

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## Key words

Word-of-Mouth, Relationship Strength, Self-Determination Theory, Motivation

## Abstract

*To understand the generation of WOM motivation, this research studies the relationship between three innate psychological needs (e.g. autonomy, competence, and relatedness) and word-of-mouth motivation based on Self-Determination Theory. How the expertise of the sender, the relationship strength between the sender and the receiver affect the motivation of word-of-mouth through these three psychological needs is also studied. A questionnaire based survey was employed to collect data.*

*The results indicate that three psychological needs affect the motivation of word-of-mouth. Moreover, the expertise of the sender affects the motivation of word-of-mouth through competence need, and the relationship strength between the sender and the receiver affects word-of-mouth motivation through relatedness need. This study will help companies to get deeper understanding of WOM motivation, and suggestions is given to improve satisfaction of consumer basic psychological needs in marketing activities.*

## Authors note

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## 1. Introduction

Word-of-mouth (WOM) refers to interpersonal communication of products, service or companies between individuals. As such communication is non-commercial, consumers tend to rely more on WOM to make a purchase decision. For companies, WOM is a double-edged sword. Positive WOM may turn an infamous company to a world-renowned overnight, while negative WOM may easily ruin a prestigious brand. There is a need to understand how WOM functions for companies to enhance communication efficiency and establish competitive advantages.

Some scholars have already discussed WOM motivation so far. However, previous studies mainly focused on the structure of WOM motivation and the effect of different motives on consumer intention and behavior, rather than the factors triggering the motivation. Self-Determination Theory explains the motivation of human behaviors from three innate psychological needs: autonomy, competence and relatedness. According to Self-Determination Theory, the factors under social context which satisfy those needs should be considered when explaining certain behaviors. Accordingly, we will discuss whether and how the social context satisfies psychological needs when we explain WOM behaviors. Based on Self-Determination Theory, the present research explains WOM motivation from a psychological perspective. It also studies how the personal characteristics of the communicators trigger WOM motivation through three basic needs. The paper ends with a discussion of the implications from our findings for marketing managers and researchers and suggest directions for future research.

## 2. Literature Review

### 2.1 Previous Research on WOM motivation

Word of mouth is the informal ways to convey ideas, comments, opinions or information between individuals who are not salesman (Engel et al., 1969). Dichter (1966) interviewed consumers on their motivation to communicate positive WOM. He identified the motivation into four categories. First, product involvement, such as easing the tension or excitement from the use of products. Second, self-enhancement, such as gaining attention, showing connoisseurship and seeking confirmation. Third, message involvement, such as sharing unique and attractive advertisement or promotion messages. Fourth, other involvement, such as helping others (Dichter, 1966). Price, Feick and Guskey (1955) reported that people spread WOM out of altruism and helping others. Therefore, people tend to provide market information, recommend products, and explain the pros and cons among brands to other consumers. Sundaram, Mitra and Webster (1998) found that consumers engaged in positive WOM because of altruism, self-enhancement and seeking opinions, while altruism, vengeance, and reduction of anger, anxiety and sadness may cause negative WOM. The similarities and differences of WOM motivation between U.S. and Chinese consumers was explored by Mee-Shew et al. (2007). Consumers in both countries share similar motivational factors, such as altruism, sense of achievement, and strength of social ties. Additionally, Chinese consumers engage in positive WOM because of seeking advice and confirmation of own judgement. In terms of negative WOM, similar motives include strength of social ties, altruism and seeking therapeutic effect. However, seeking correction or compensation and seeking bargaining power are found only among U.S. consumers, while seeking confirmation of one's own judgment, seeking advice, and seeking retaliation are found only among Chinese consumers. Hennig-Thurau et al. (2004) also revealed eight motives of electronic WOM, including concerns for other consumers, venting negative feelings, extraversion/positive self-enhancement, social benefits, economic incentives, helping the company, advice seeking and platform assistance.

While prior research has studied different types of motives of WOM and their effect on intention and behaviors, less is known about the factors triggering the motives of WOM. This research will to discuss these factors based on Self-Determination theory.

### 2.2 Self-Determination Theory

According to Self-Determination Theory, humans were assumed to be active and growth-oriented organisms that naturally tend to pursue psychological development, continuously strive for challenges, and integrate external experiences and sense of self (Deci & Ryan, 2000). These natural propensities require continuous support from the social environment to function effectively. Deci & Ryan (2000) proposed that sustaining psychological development and effective functioning depended on satisfaction of basic psychological needs for autonomy, competency and relatedness. They argued that these needs were inherent and ubiquitous, and had little difference across different gender, groups or cultures.

The autonomy need is the desire to self-organize experience and behavior and to have activity consistent with integrated sense of oneself. When an individual perceives autonomy (for example, expressing opinions and taking actions), or he can decide on his own in a high degree, he feels that he can control his own behaviors, and becomes the owner of himself. Therefore, he has high internal motivation to participate in activities. The relatedness need refers to the desire to establish emotional bonds and affiliation with someone or a group – to be loved, understood and appreciated, also to experience a sense of belongingness. It reflects the need of being connected emotionally with someone who is important. The competence need is described as the trust that an individual believes his behaviors can reach a certain level in order to complete an

activity and to control the environment. For example, a valid and right challenge will fully arouse one's enthusiasm. In summary, the social context satisfying these needs can facilitate the internalization of external motivation, and persist in an activity and positive mental conditions, thus lead to better development and more positive results. The social context that thwarts satisfaction of these needs, by contrast, results in lower motivation, work performance and happiness (Liu & Zhang, 2010).

According to Self-Determination Theory, an individual's motivation and behaviors should be examined by whether the environment satisfies the needs for autonomy, competence and relatedness. The present study focuses on the influence of three psychological needs on WOM motivation, and how this effect is driven by WOM transmitter personal factors.

### **2.3 Personal Factors of the Transmitter**

#### **2.3.1 Relationship Strength**

Bristor (1990) indicated that the WOM communication network is the social network consisting of WOM communicators and their relationships between each other. The relationship strength, which is the extent of the association between people, is considered as the power to connect one and another in this social network. People in weak ties may be stranger or merely know each other. Contradictory, in strong ties, people have very close relationships, such as neighbors or friends. Prior research has mainly examined the effect of the relationship strength on WOM from the perspective of WOM receivers. For example, Smith (2002) showed that the effect of WOM on purchasing decision is influenced by the relationship strength, no matter the purpose is hedonic or pragmatic. Wirtz and Chew (2002), on the other hand, indicated that compared with consumers in weak ties, consumers in strong ties are more likely to engage in WOM. In this research, we propose that relationship strength increases satisfaction of three psychological needs, thus influences the motivation for and intention of WOM.

#### **2.3.2 Expertise of WOM Transmitters**

Expertise of WOM transmitters refers to the professional abilities and rich consumption experiences of a particular product that the transmitter possesses. Researchers have found that expertise of WOM transmitters affects consumer purchasing decisions through WOM (Bansal & Voyer, 2000). Transmitters with professional knowledge are often experts or quasi-experts in a certain field. Their expertise allows them to easily get in touch with new products and acquire relative knowledge, earning high degrees of prestige through WOM (Mitchell & Dacin, 1996).

Nevertheless, previous researches seldom discuss how expertise of WOM transmitter affects the motivation and behaviors of WOM. Childers et al. (2001) suggested that key opinion leaders had more powerful influence on consumer behavior. As key opinion leaders, one of their pivotal characteristics is their rich knowledge and professional competence in a certain field. They are highly creative and bear greater risks. We assume that expertise of WOM transmitter may increase satisfaction of psychological needs, which influence WOM motivation.

### **3. Research Model and Hypotheses**

According to the literature review above, we propose the research framework shown in Figure 1. Expertise of WOM transmitter, together with relationship strength of WOM transmitter and receiver, will facilitate consumer perceived satisfaction of three psychological needs during the process of WOM, which in turn affect WOM motivation.

#### **3.1 Expertise of WOM Transmitter and Satisfaction of Competence Need**

As mentioned above, expertise of WOM transmitter refers to the professional abilities and rich consumption experiences of a particular product that the transmitter possesses. In Self-Determination Theory, competence need is defined as the trust that an individual believes his behaviors can reach a certain level in order to complete an activity and to control the

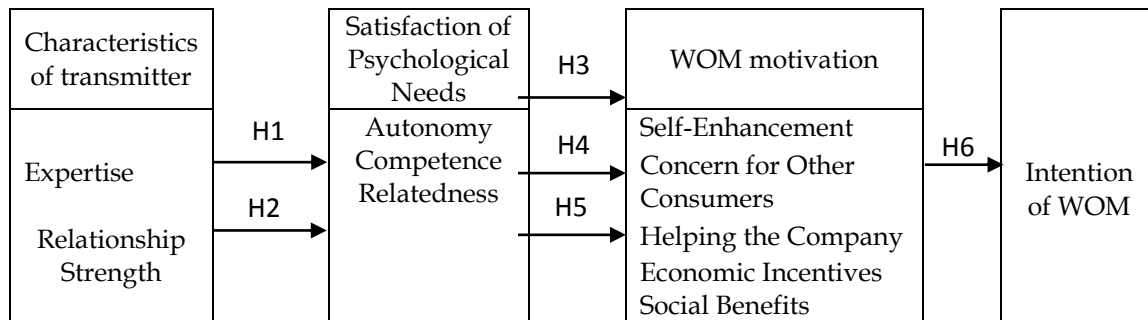


Figure 1 Research Framework

environment. However, this trust could be supported or thwarted by the environment. Researches on consumer behaviors indicates that key opinion leaders play a critical role in interpersonal communication. Firstly, mass communication media influence key opinion leaders, then key opinion leaders spread the information to their followers through interpersonal network. Key opinion leaders are keen on shopping and browsing product information, and thus very concerned about retail price, promotional activities and service quality of retail stores. In this regard, they have extensive product knowledge and rich purchasing experiences, proactively share product information with others, and endeavor to help others (Fieck & Price, 1987). People with high degree of expertise and competence will proactively engage in WOM communication in order to satisfy their competence need, as they believe they are capable of communicating correct product and brand information out of confidence.

**H1: Expertise of WOM transmitter positively affects satisfaction of competence need.**

### 3.2 Relationship Strength and Satisfaction of Relatedness Need

According to Self-Determination Theory, relatedness need refers to the perceived understanding and respect between people. They perceive a sense of belongingness or affinity in groups or with others, and such relatedness in turn provides a supportive social context. Interpersonal relationship that satisfies relatedness need will make the individual realize that his own interest is cared about and that he is being liked.

Relationship strength is perceived closeness of the relationship between the WOM transmitter and receiver. Bristor (1990) suggests that WOM communication network is a social network which enhances interpersonal relationship through WOM. When relationship strength is strong and people are closely connected, they would like to express their feelings and opinions without reservation. They feel that they are trusted and understood each other, and a sense of belongingness will be developed. That is why WOM between acquaintances is more frequent (Anderson, 1998; Frenzen & Nakamoto, 1993). We assume that relationship strength increases satisfaction of relatedness need.

**H2: Relationship strength positively affects satisfaction of relatedness need.**

### 3.3 Satisfaction of Psychological Needs and WOM motivation

Self-Determination Theory demonstrates that every single person has the need for autonomy, relatedness and competence. Once these needs are satisfied, individuals will be driven to work by internal motivation, stretching potential and producing positive outcomes. According to Self-Determination Theory, instead of individual difference of the density of those psychological needs, satisfaction of these needs which affects motivation is underlined. We hereby propose the following hypotheses:

**H3: Satisfaction of autonomy need positively affects motives of WOM.**

H3a: Satisfaction of autonomy need positively affects motive of self-enhancement.



H3b: Satisfaction of autonomy need positively affects motive of concerns for other consumers.

H3c: Satisfaction of autonomy need positively affects motive of helping the company.

H3d: Satisfaction of autonomy need positively affects motive of economic incentives.

H3e: Satisfaction of autonomy need positively affects motive of social benefits.

**H4: Satisfaction of competence need positively affects motives of WOM.**

H4a: Satisfaction of competence need positively affects motive of self-enhancement.

H4b: Satisfaction of competence need positively affects motive of concerns for other consumers.

H4c: Satisfaction of competence need positively affects motive of helping the company.

H4d: Satisfaction of competence need positively affects motive of economic incentives.

H4e: Satisfaction of competence need positively affects motive of social benefits.

**H5: Satisfaction of relatedness need positively affects motives of WOM.**

H5a: Satisfaction of relatedness need positively affects motive of self-enhancement.

H5b: Satisfaction of relatedness need positively affects motive of concerns for other consumers.

H5c: Satisfaction of relatedness need positively affects motive of helping the company.

H5d: Satisfaction of relatedness need positively affects motive of economic incentives.

H5e: Satisfaction of relatedness need positively affects motive of social benefits.

### 3.4 WOM motivation and Intention of WOM

Several motives for WOM have been found so far (Sundaram & Webster, 1998; Hennig-Thurau et al., 2004). Self-enhancement, concern for other consumers, helping the company, economic incentives and social benefits are widely acknowledged as motives of WOM. The research of Hennig-Thurau et al. (2004) indicates that the stronger these motives, the more possibly WOM occurs.

**H6: Motivation of WOM communicators positively affects intention of WOM.**

H6a: Self-enhancement positively affects intention of WOM.

H6b: Concern for other consumers positively affects intention of WOM.

H6c: Helping the company positively affects intention of WOM.

H6d: Economic incentives positively affect intention of WOM.

H6e: Social benefits positively affect intention of WOM.

## 4. Research Design

After reviewing relevant literature on WOM and Self-Determination Theory, we summarize five motives of WOM, including concern for other consumers, self-enhancement, social benefits, economic incentives, and helping the company. The scale developed by Netemeyer et al. (1992) is used to evaluate expertise of WOM transmitter. The transmitter's knowledge and abilities of the product are mainly investigated from five aspects: insightful, capable, knowledgeable, and trained and experienced (Netemeyer et al., 1992). We adopt the scale proposed by Frenzen and Nakamoto (1993) to evaluate the relationship strength, including closeness, familiarity, support and connection. The scale examining satisfaction of psychological needs is adapted from the innate psychological needs scale of Deci and Ryan (2000). The five motives of WOM is measured according to Hennig-Thurau et al. (2004), including self-enhancement, concern for other consumers, helping the company, economic incentives and social benefits. And the scale of WOM comes from Brown (2005). All the measures in this study are in standard seven-point Likert scale format.

We tested the survey after referencing from other scholars, and finalized the questionnaire according to test results. The questionnaire was distributed via online and offline channels to reach target population. The survey was posted through social media such as Weibo, Wechat, and QQ, and successfully collected 382, with 332 valid. In addition, the "mall intercept" method was undertaken at the train station and a popular mall. 100 paper questionnaires was

distributed and collected, with 92 valid. In total, 424 questionnaires are valid. The collected and valid questionnaires comprise of 37.6% and 87.9% of total distributed questionnaires respectively. T-test was conducted between the online and offline samples. There is no significant difference on the age, sex, education degree between the two samples.

Among 424 valid samples, male respondents consist of 53.5% while female 46.5%. In terms of age distribution, 82.5% of the samples fall on the range between 20 and 30 years old. Also, 89.6% of the respondents receive bachelor or higher degrees, and thus they are more concerned about the overall consumption experience.

## 5. Data Analysis

### 5.1 Reliability Analysis

According to reliability analysis of all 11 variables, apart from self-enhancement (0.690), relationship strength (0.785) and social benefits (0.798), reliability coefficients (Cronbach's  $\alpha$ ) of other variables are above the 0.8 level. The result indicates that all measures are reliable.

### 5.2 Validity Analysis

The research model was subjected to a confirmatory factor analysis by using maximum likelihood estimate program in LISREL 8.52. The fit statistics of the confirmatory factor analysis indicate that the measurement model fits the samples well ( $\chi^2/df=2.15$  ( $P=0.00$ ),  $CFI=0.92$ ,  $NFI=0.91$ ,  $NNFI=0.91$ ,  $RMSEA=0.076$ ). Meanwhile, all factor loadings are highly significant, and none of the shared variances ( $\Phi^2$ ) between pairs of constructs is larger than the average variance extracted (AVE) by each construct, showing that the measures exhibit convergent and discriminant validity.

### 5.3 Tests of the Research Model and Hypotheses

Using sample statistics, we conduct structural equation modeling. The results indicate that this model performs well in terms of goodness-of-fit ( $\chi^2/df=2.01$  ( $P=0.00$ ),  $NFI=0.900$ ,  $NNFI=0.915$ ,  $CFI=0.921$ ,  $RMSEA=0.076$ ). Figure 2 and Table 1 below demonstrates the path coefficients of different variables in the research model and summarizes the results of the tests of hypotheses respectively.

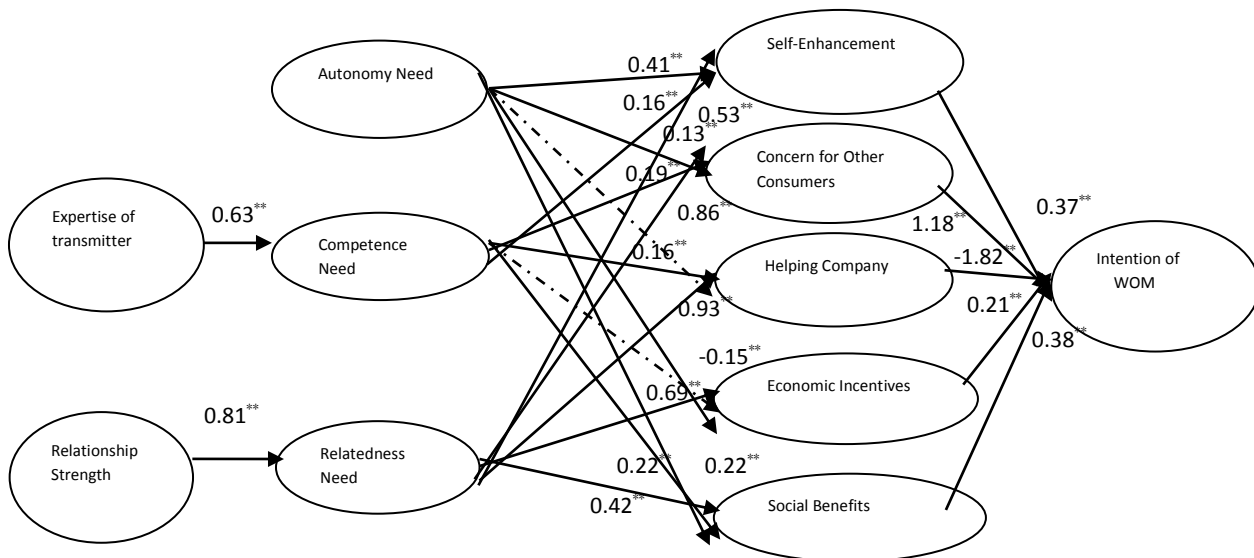


Figure 2 The Path Coefficient of the Model

**Table 1 Summary of Tests of Hypotheses**

Hypothesis	Content	Supported or Not
<b>H1</b>	<b>Expertise of WOM transmitter positively affects satisfaction of competence need.</b>	<b>Yes</b>
<b>H2</b>	<b>Relationship strength positively affects satisfaction of relatedness need.</b>	<b>Yes</b>
<b>H3</b>	<b>Satisfaction of autonomy need positively affects motives of WOM.</b>	<b>Partially Support</b>
H3a	Satisfaction of autonomy need positively affects motive of self-enhancement.	Yes
H3b	Satisfaction of autonomy need positively affects motive of concerns for other consumers.	Yes
H3c	Satisfaction of autonomy need positively affects motive of helping the company.	No
H3d	Satisfaction of autonomy need positively affects motive of economic incentives.	No
H3e	Satisfaction of autonomy need positively affects motive of social benefits.	Yes
<b>H4</b>	<b>Satisfaction of competence need positively affects motives of WOM.</b>	<b>Partially Support</b>
H4a	Satisfaction of competence need positively affects motive of self-enhancement.	Yes
H4b	Satisfaction of competence need positively affects motive of concerns for other consumers.	Yes
H4c	Satisfaction of competence need positively affects motive of helping the company.	Yes
H4d	Satisfaction of competence need positively affects motive of economic incentives.	No
H4e	Satisfaction of competence need positively affects motive of social benefits.	Yes
<b>H5</b>	<b>Satisfaction of relatedness need positively affects motives of WOM.</b>	<b>Yes</b>
H5a	Satisfaction of relatedness need positively affects motive of self-enhancement.	Yes
H5b	Satisfaction of relatedness need positively affects motive of concerns for other consumers.	Yes
H5c	Satisfaction of relatedness need positively affects motive of helping the company.	Yes
H5d	Satisfaction of relatedness need positively affects motive of economic incentives.	Yes
H5e	Satisfaction of relatedness need positively affects motive of social benefits.	Yes
<b>H6</b>	<b>Motivation of WOM positively affects intention of WOM.</b>	<b>Partially Support</b>
H6a	Self-enhancement positively affects intention of WOM.	Yes
H6b	Concern for other consumers positively affects intention of WOM.	Yes
H6c	Helping the company positively affects intention of WOM.	No
H6d	Economic incentives positively affect intention of WOM.	Yes
H6e	Social benefits positively affect intention of WOM.	Yes

## 6. Conclusion

### 6.1 The Effect of Psychological Needs on WOM motivation

This study reveals that satisfaction of transmitters psychological needs significantly affects WOM motivation, and therefore supports Deci and Ryan's point of view that motivation for behaviors derive from three basic psychological needs (Deci & Ryan, 2000).

While emphasizing satisfaction of autonomy and competence need, Deci and Ryan suggested that relatedness need, which was considered as "needed backdrop", was less important and promoted internal motivation more indirectly. In contrast, Vallerand regarded the related need as an innate psychological need of an individual in social groups (Vallerand, 1997). He argued that relatedness need was less important than the other two needs for activities that only require independent efforts, such as studying. However, when teamwork was involved, satisfaction of relatedness need became significant to the outcome (Vallerand, 1997). In this study, we find that satisfaction of relatedness need is the most significant to all five motives of WOM among three psychological needs, indicating that whether the transmitter engages in WOM depends on his satisfaction of relatedness need, that is, whether he perceives a sense of belongingness. Our research supports Vallerand's standpoint.

The research also suggests that satisfaction of autonomy need insignificantly affects motive of helping the company, and negatively affects motive of economic incentives. Satisfaction of autonomy need is on personal level, which can be controlled by the transmitter himself. Business operation, on the other hand, may hardly be controlled by his own. That may be the reason why satisfying autonomy need cannot effectively motivate the transmitter to help the company. Also, satisfaction of autonomy need refers to the desire to follow one's own will and not be shackled. In this sense, such inner desire contradicts with offering incentives to motivate WOM. Hence, satisfaction of autonomy need has significantly negative impact on economic incentives. Besides, the study reveals that the effect of satisfaction of competence need on economic incentives is insignificant, suggesting that satisfaction of competence need will not trigger motivation to pursue economic incentives.

### 6.2 The Effect of Personal Factors on WOM motivation

Based on Self-Determination Theory, the study constructs an effect mechanism indicating that personal factors affect WOM motivation through satisfaction of psychological needs. It is certified that Self-Determination Theory can be applied to WOM communication, and can yield meaningful guidance to motivate WOM.

The study also suggests that expertise of WOM transmitter positively affects satisfaction of competence need, and the relationship strength positively affects satisfaction of relatedness need. Thus, the more expertise WOM transmitter has, the more likely the competence need will be satisfied. Meanwhile, if the relationship strength between WOM transmitter and receiver is high, the relatedness need is more likely to be satisfied, which makes WOM motivation more likely to be triggered.

### 6.3 The Relationship between Motivation and Intention of WOM

The research indicates that self-enhancement, concern for other consumers, helping the company, economic incentives and social benefits will significantly affect WOM intention. Among these motives, the concern for other consumers has the most significant effect, while economic incentives the least. Consequently, it is suggested that to trigger WOM communication, companies should encourage consumers to help each other in addition to offering economic incentives.

The research also reveals that helping the company negatively affects WOM motivation, which is inconsistent with the research by Hennig-Thurau et al. (2004). It is possible that motives

of concern for other consumers and helping the company are similar in their construct, multicollinearity may exist, which can be subjected to investigation in future research.

## 7. Contribution, Limitation and Future Research

The present study extends the application of Self-Determination Theory to management of WOM from information management, sports management, education management, health management and other behavioral management fields. It successfully integrates motivation theories with WOM management theories to examine how external environmental factors affect three psychological needs to trigger WOM motivation.

The research suggests companies to improve satisfaction of consumer basic psychological needs in daily marketing activities in order to arouse WOM motivation. For example, they can educate consumers to expand their knowledge on product or service; they can also promote consumers to communicate with each other and enhance familiarity among them by establishing membership clubs or online discussion boards.

There are some limitations in this study. First, when analyzing external environmental factors, we only take personal factors of transmitters into consideration, but ignore other social factors, such as rewards provided by companies, which may influence WOM motivation through three psychological needs. Second, the samples are collected by recalling the inner thoughts and motivation, their respective answers may impair the subjectivity of the study. Third, the age of most of the samples ranges from 20 to 30 years old, it may also impact the result. In general, it is expected to conduct future researches on social factors that trigger WOM motivation, including rewards provided by companies, consumption experience and consumer involvement.

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## The Heckscher-Ohlin versus Linder's Theory: evidence from Malaysian exports

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### Keywords

International Trade, Exports, Gravity Model, H-O Theory, Linder's Theory, Pooled OLS

### Abstract

*This paper analyzes the export destinations of Malaysia and top six trading partners (an average from 1995 – 2012) using gravity model and pooled ordinary least square (OLS) analysis. As suggested by the pioneer of gravity model (Tinbergen, 1962), the vibrancy of trading activities depend on the resemblance of exporting and importing countries which in parallel with Staffan Linder theory of trade (1961). These include similarities such as GDP per capita, international language, and border sharing and taste in product consumed (Morales, Sheu and Zahler, 2014). The theory also highlights that the distance between the two trading countries have significant effect on trading activities. However, the empirical study in the case of Malaysia proven opposite effect thus allowing Heckscher-Ohlin theory to be highlighted in contrast to Linder theory as H-O theory suggests that a particular country will trade with another country with dissimilar economic performance level. The general finding of this study suggest that Malaysia is more towards Linder theory based on the coefficient sign of GDP per capita differential.*

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### 1. Introduction

Quoting numerous studies such as (Biddingmaier, 2007; Sun & Heshmati, 2010; Wang, Wei and Liu, 2010; Jarreau and Poncet, 2012), international trade without a doubt is one of many reasons a country can develop over time. Feder (1983) conducted an empirical study on export and economic growth where he concludes that a country should focus the labor and resources on the export sector instead of non-export sector. By doing so, the productivity of exportable goods will increase thus have a positive impact on country's balance of payment. This strengthens the idea that export does give positive impact on the economic growth as highlighted by theory of comparative advantage by David Ricardo (1817). Being aware of this situation, Malaysia, one of the fastest developing country in Southeast Asia region, take advantage on the wealth of natural resources of the country. US Energy Information Administration reported in 2014 that Malaysia is the second largest exporter of refined petroleum as well as crude palm oil in Southeast Asia region standing after Indonesia. Thus, export activities are crucial in providing growth in Malaysia national income report.

In 2013 alone, Malaysia recorded a value of export at \$254 billion enable her to make it into list of 20 largest exporter all over the world (The Observatory of Economic Complexity). The value rose at a rate of 4.2% compare to the year 2008 where the total export only worth \$210 billion. This fact alone is enough to prove that Malaysia is aware of the relevancy of export towards her development which in line with statement stated by Yusoff (2005), as an open economy, Malaysia does rely upon her external trade for economic growth. Making into top 20 list of largest exporter, this raise the question of who trade the most with Malaysia and why? Is it involving neighbor countries or does it involve with half way around the world countries. Does distance play a significant role in determining export as suggested by gravity model?

Despite of the positive impact of export on economic growth, the evidence provided by previous studies are more to the exports determinants between the bilateral countries. There is

less light shed upon the application of the two theories of trade which are; (1) Heckscher-Ohlin (H-O) Theory (1933) and (2) Linder Theory (1961). H-O theory suggest that bilateral trade occur between two countries that does not possess the same level of economic development whereas Linder theory argue that bilateral trade will only happens between two countries which possess the same level of economic development. In order to determine the application of these theories, a gravity model developed by Newton theory of gravity and adopted in explaining bilateral trade first by Tinbergen (1962) and Poyhonen (1963). Although, plethora studies have been published on both theories in the literature, to the best of our knowledge, there is yet evidence pertaining to whether Malaysia's trade follow either of these theories. Therefore, this study is trying to fill the aforementioned gap and extending the study conducted by Zainal Abidin, Islam and Haseeb (2015) using the gravity model in Malaysia.

The organization of this paper consists of four sections which are (1) literature review; (2) data and methodology; (3) analysis of findings and lastly (4) conclusion and recommendation.

## 2. Literature Review

The epistemology development on gravity model pertaining to bilateral trade has been investigated in the economics and finance literature for many years. To date, gravity model still holds a hypothesis of "the further the distance between two trading countries, the lesser the bilateral trade between them" where it shows a negative relationship of trade with distance (Tinbergen, 1962; Poyhonen, 1963; Bergstrand, 1985; Porojan, 2001; Rahman, 2003; Batra, 2006; Ravishankar and Stack, 2014). In simple words, distance always relate with transportation cost in which according to simple economic law of demand and supply; the higher the cost, the higher the price causing the demand to drop. A study by Linnemann (1966) states that there are three major cost that affecting trade which are; (1) physical shipping cost, (2) time-related cost and (3) cost of cultural unfamiliarity. This study is supported by Frankel, Stein and Wei (1997) stating that shipping cost is the most dominant cost compare to the other two. Thus, this implies that later in the regression, distance variable should bear a negative coefficient sign indicating the aforesaid gravity model of trade.

Twenty cohort study analyzes have examined the gravity model on bilateral trade. Yet, exploration of knowledge did not particularly highlighted on the fundamental theories of trade such as Heckscher-Ohlin theory of trade and Linder theory of trade. Referring back to Bergstrand (1985), Rahman (2003) and Batra (2006) where they have discussed on gravity model towards trade determinants, they did mentioned on both of the H-O and Linder theories but just merely mentioned. As for the case of Malaysia international trade, Zainal et. al. (2015) only focusing the gravity model on targeted regional partnership such as Organization of Islamic Countries (OIC) and Association of South-East Asia Nation (ASEAN) but did not highlight the trade theories applicable in the case of Malaysia whether it is based on H-O theory or Linder theory or even neither of the theories.

In conjunction with previous paragraph, H-O theory of trade exist in the year of 1933 by Bertil Ohlin and Eli Heckscher where it emphasized that country with different level tend to trade more compare to country with the same level. This is argued by Staffan Linder (1961) where Linder highlights that country tend to trade with partners who share the same level of development because they tend to enjoy the same preferences but differentiated products. To clarify this argument, we will look at the coefficient of GDP per capita differential as suggested by Frankel et. al. (1997) in their books entitled *Regional Trading Blocs in the World Economic System*. The book stated that if the coefficient bears the positive sign, it means that the particular country implementing H-O theory. Opposite things happen when the coefficient carries negative sign which represent Linder theory is apply in the particular study. Hence, the second

objective of this paper is to identify the theory applicable in the case of Malaysia and top six export destinations.

In recent years, large number of studies has been conducted on determinants of export between two countries such as Yanikkaya (2003); Jongwanich (2010); Trang and Hieu (2011); Carneiro (2011); Agosin, Alvarez, and Bravo-Ortega (2012); Carrera, Grujovic, and Robert-Nicoud(2015); Zainalet. al. (2015) where among the independent variables included are gross domestic product, gross domestic product per capita, inflation rate, unemployment rate, trade openness, total population and exchange rate between those two trading countries. All of these economic terms influence the production in the country and at the same time influences the export of the nation. A positive coefficient is expected for GDP, GDPPC, trade openness and population as an increase of this variables will results in increase of export activities as reported in previous studies above. In contrast, distance, exchange rate, inflation rate and unemployment rate expected to carry a negative coefficient because these variables are inversely proportional to export level.

Considering all of this literature and evidence, the general findings suggest that the gravity model produce consistent results on bilateral trade. However, repeating back in the case of Malaysia, no literatures ever recorded about Malaysia's trade with six top exporting destination countries are due to H-O theory, Linder theory or neither both of it.

### 3. Data and Methodology

According to annual reports by MATRADE (an organization responsible for monitoring export activities of Malaysia), the top six export destinations of Malaysia from the year 1995 until 2012 on average are Singapore, China, Japan, United States of America, Thailand and Hong Kong. If we take a look from geographical perspective, only Singapore and Thailand share a border with Malaysia where Singapore are connected by bridge and Thailand are connected by land at northern state of Malaysia. The farthest country is United States of America which located 15 348 kilometers away from Kuala Lumpur. Table 1 presents the value of Malaysia export to top six export destinations and Table 2 presents the distance between Kuala Lumpur and destinations capital city.

**Table 1: The Value of Malaysia's Export to Top Six Export Destinations**

Year	Singapore	China	Japan	United States of America	Thailand	Hong Kong
1995	10744910094	2380657915	9255780554	11270765722	3171988253	2611358712
1996	10907415823	2077352358	10354553548	11153503656	3578043290	3056893901
1997	15212653011	2227216860	9948792995	12910620143	2947915137	3995304738
1998	11345631195	2206285963	7720606992	14340874804	2177444625	3293313875
1999	12222083380	2719777102	9408242436	16306794776	2527455371	3582666953
2000	16808608544	4200765141	13817702911	23959114895	3403417423	4617031478
2001	14605514194	4725799809	8354138841	21632831571	3134467776	4594904322
2002	15811167186	7425460161	9339801650	23403176366	3528524975	3808855445
2003	20105141944	10899030437	10513236793	25148312627	4748204558	5958408823
2004	23367439269	12892451445	13604541904	28235453789	5443063817	6975576951
2005	25926343504	14278393419	14032916075	32870195943	8189613956	8245964293
2006	29554761053	17179687919	14167698939	36349485466	8133163945	7950784258
2007	27119192908	16947801716	16147480347	33264038898	8172750730	8121796294
2008	28712592897	16620994438	20472572380	26678253069	9495935749	8454399840
2009	22004641865	19090876895	15055206259	21686771103	8439274401	8195147664
2010	27699814203	28587393747	20748165351	23523287152	10387065354	10117899381
2011	31104341241	34734435284	27334862134	22654979658	12005860404	10210521564
2012	31003655290	29587285258	29601418126	17460293845	12198097331	9732207885

Notes: All the values are in USD as reported by The Observatory of Economic Complexity.



**Table 2: Distance to Export Destinations**

Capital City	Distance	Capital City	Distance
Singapore	300	Washington D.C (USA)	15348
Beijing (China)	4335	Bangkok (Thailand)	1191
Tokyo (Japan)	5318	Hong Kong	1561

Notes: The distance is measured from Kuala Lumpur and values are in kilometers.

For estimation purpose, STATA 11 software is chosen due to accuracy and capability of the software to deal with panel data. There are few advantages of using panel data estimation such as it can capture relevant relationship between countries over time and can monitor unobservable individual effect (Rahman, 2009).

In order to standardize the data, we transformed it into natural logarithm form as presented by the abbreviation of *ln*. Then, stationarity test was conducted to ensure that the data are not following particular trend of movement to avoid absurd estimations. Levin-Lin-Chu (LLC) unitroot test was chosen which carry a hypothesis of; (1)  $H_0$ : Panels contain unit roots and (2)  $H_a$ : Panels are stationary. LLC test results on natural log variables show that only four variables are stationary and the rest contain unit root. To treat this problem of non-stationary, first order difference is conducted on all variables and LLC test was re-estimate where the results is presented in Table 3 below.

**Table 3: Descriptive Statistic of First Order Difference and Levin-Lin-Chu Unitroot Test**

Variable	Obs	Mean	Std. Dev.	Min	Max	LLC test (p-value)
d1lnexpijt	102	0.0769	0.1868	-0.5032	0.4519	(0.0001)***
d1lngdpit	102	0.0726	0.1298	-0.3278	0.2020	(0.0001)***
d1lngdpjt	102	0.0576	0.0897	-0.2993	0.2576	(0.0002)***
d1lngdppcit	102	0.0527	0.1311	-0.3527	0.1856	(0.0001)***
d1lngdppcjt	102	0.0479	0.0899	-0.3109	0.2525	(0.0001)***
d1lngdppcijt	102	-0.0013	0.1204	-0.4622	0.3259	(0.0001)***
d1lninfjt	102	-0.0432	0.7950	-2.2330	1.0756	(0.0001)***
d1lninfjt	102	-0.0388	1.2611	-3.3350	4.4004	(0.0001)***
d1lnuneit	102	-0.0019	0.1118	-0.2151	0.2877	(0.0001)***
d1lnunejt	102	0.0081	0.2219	-0.4055	1.3291	(0.0001)***
d1lntrait	102	-0.0112	0.0566	-0.0857	0.1207	(0.0001)***
d1lntrajt	102	0.0207	0.0894	-0.3420	0.1952	(0.0001)***
d1lnpopit	102	0.0198	0.0033	0.0156	0.0255	(0.0001)***
d1lnpopjt	102	0.0096	0.0104	-0.0148	0.0532	(0.0001)***
d1lnexrijt	102	-0.0156	0.1427	-0.3883	0.3778	(0.0001)***

Notes: \*\*\*, \*\* and \* are significance at 1%, 5% and 10% respectively.

Table 3 shows the descriptive statistics of overall data consisting 102 observations. LLC test conducted shows that the probability values are all less than 0.01 which means we fail to reject null hypothesis. This concludes that the data is stationary at first order difference compare to raw data and natural log data. After that, Breusch - Pagan Lagrangian multiplier was conducted and the test results shows probability value is more than 0.05 thus indicating we fail to reject null hypothesis. Null hypothesis stated that pooled ordinary least square need to be conducted to avoid wrong estimation procedure.

Not just that, since the distance data is in static form for all period of time, we need to conduct two stage regression where Individual Effect are extracted from first regression before re-estimate it with distance as independent variable as reported by Rahman (2003); Batra (2006);



and Zainal et. al. (2015). The equation and model specification are explained in the next subsection.

### 3.2 Model Specification

The first stage pooled ordinary least square regression is explained in the following equation:

$$d1\ln(EXP_{ijt}) = \beta_0 + \beta_1 d1\ln(GDP_{it}) + \beta_2 d1\ln(GDP_{jt}) + \beta_3 d1\ln(GDPPC_{it}) + \beta_4 d1\ln(GDPPC_{jt}) + \beta_5 d1\ln(GDPPC_{ijt}) + \beta_6 d1\ln(INF_{it}) + \beta_7 d1\ln(INF_{jt}) + \beta_8 d1\ln(UNE_{it}) + \beta_9 d1\ln(UNE_{jt}) + \beta_{10} d1\ln(TRA_{it}) + \beta_{11} d1\ln(TRA_{jt}) + \beta_{12} d1\ln(POP_{it}) + \beta_{13} d1\ln(POP_{jt}) + \beta_{14} d1\ln(EXR_{ijt}) + \varepsilon_{ijt}$$

Where the variables are explained as follow:

d1	= First Order Difference
ln	= Natural Logarithm Form
<i>i</i>	= Home Country (Malaysia)
<i>j</i>	= Destination Country (Top 6 Malaysia Trading Partners)
$\varepsilon$	= Error Term
EXP	= Export value of Home Country (Malaysia) to Top 6 Destinations
GDP	= Gross Domestic Product (current USD)
GDPPC	= Gross Domestic Product Per Capita (current USD)
INF	= Inflation Rate (annual percentage)
UNE	= Unemployment Rate (percentage of total labor force)
TRA	= Trade Openness (percentage of GDP)
POP	= Total Population
EXR	= Exchange Rate of 1 Ringgit to Destination Country Currency

The second stage regression involves the implementation of gravity model in our estimation. We are unable to include the distance variable in the first regression because the data on distance between capital cities of trading countries are static over time and unable to be process together with unbalanced data as mentioned by Rahman (2003) in his study. Thus, the linear equation of second stage regression is as follow:

$$IE_{ij} = \beta_0 + \beta_1 \ln(DIST_{ijt}) + \varepsilon_{ijt}$$

Where the variables are explained as below:

IE	= Individual Effect (Home Country and Destination Country)
DIST	= Distance between Capital City of Home Country and Capital City of Destination Country (in Kilometers)

### 3.3 Data Source

The data used in this study is obtained from multiple sources consists of international data storage covering the time period of 18 years starting from the year 1995 until 2012. The data of GDP, GDPPC, INF, UNE, TRA and POP are obtained from the *World Development Indicators (WDI)* database of the World Bank. All the values of GDP and GDPPC are originally in the form of USD whereas INF, UNE and TRA are in percentage. As for the exchange rate data, it was taken from United States foreign exchange website at [www.usforex.com](http://www.usforex.com) and the data are in yearly average of 1 Ringgit Malaysia against export destination currency. Moreover, the data of exports between Malaysia as home country to top six destinations are acquired from the Observatory of Economic Complexity at [atlas.media.mit.edu](http://atlas.media.mit.edu) in the measurement of USD. Finally, the distance data are obtained from an Indonesian tourism website at [www.indo.com/distance](http://www.indo.com/distance) and the value are all in the unit of kilometers.

#### 4. Analysis and Findings

The pooled OLS regression results are reported in Table 4.

**Table 4: Results on Pooled Ordinary Least Square Estimation**

Dependent Variable: $d1lnexpijt$						
Independent Variable	Coefficient	Standard Error	t	P>t	R <sup>2</sup>	F-stats
$d1lngdpit$	(omitted due to collinearity)				0.6285	12.55 (0.0001)***
$d1lngdpjt$	(omitted due to collinearity)					
$d1lngdppcit$	0.0445	0.2724	0.16	0.8710		
$d1lngdppcjt$	1.1371	0.2246	5.06	(0.0001)***		
$d1lngdppcijt$	-0.2253	0.1153	-1.95	(0.0540)*		
$d1lninfjt$	-0.0653	0.0206	-3.17	(0.0020)***		
$d1lninfjt$	-0.0046	0.0111	-0.41	0.6790		
$d1lnuneit$	-0.0601	0.1983	-0.30	0.7630		
$d1lnunejt$	-0.0677	0.0742	-0.91	0.3640		
$d1lntrajt$	0.0270	0.3563	0.08	0.9400		
$d1lntrajt$	1.5280	0.2679	5.70	(0.0001)***		
$d1lnpopit$	11.6657	4.7695	2.45	(0.0160)**		
$d1lnpopjt$	-0.4019	1.2600	-0.32	0.7500		
$d1lnexrijt$	-0.1919	0.1016	-1.89	(0.0620)*		
constant	-0.2444	0.1006	-2.43	0.0170		

Notes: \*\*\*, \*\* and \* are significance at 1%, 5% and 10% respectively.

Referring to table 4, out of 14 variables, two was omitted due to collinearity problem which are GDP of home country and destination country. GDP per capita of destination country bear a positive coefficient indicating that an increase of 1% of destination country GDP per capita, the export will increase 1.1371%. Next, the differential GDP per capita between home country and destination country bear a negative coefficient which means that the export value will decrease by 0.2253% if the difference in GDP per capita increase by 1%.

Inflation rate of home country proven to be significant at 1% confident level where it carry a negative coefficient as expected. This shows that an increase of inflation rate of Malaysia by 1% will reduce the export value by 0.0653%. Apart from that, trade openness of destination country also show a significant level at 1% confident interval. It bears a positive sign as expected means that the more lenient the trade barriers are, the higher the value of export towards the destination country.

Furthermore, population of home country result show a positive relationship where an increase in population of Malaysia by 1% will results in the increase of export by 11.6657%. Finally, an exchange rate which is one of the popular determinants of export shows a 10% confident interval with negative coefficient. This explains that as the home country currency devaluate, in this case Ringgit Malaysia, the volume of exports will decrease by 0.1919.

On the other hand, it is quite surprising that six of the variables show insignificant probability values which made up of GDPPC of home country, INF of destination countries, UNE of both home and destination country, TRA of home country and lastly POP of destination countries.

By considering the full pooled OLS regression results, the overall model suggest that the result tends to reject the null hypothesis at 1% level indicating the model overall goodness of fit. Following that, R<sup>2</sup> proved that the independent variables can explain the dependent variable at 62% whereas the remaining 38% is due to omission of other important independent variables.

To achieve the second objective of determining H-O or Linder, we need to take a look at the coefficient sign of GDPPC differential which is obviously negative and significant at 1% interval. Quoting from literature, this is a sign of Malaysia are actually obeying the Linder

hypothesis stating that we are trading with those country the most because we are having the same preferences as them.

**Table 5: Results on Second Stage Individual Effect and Distance Estimation**

Dependent Variable: Individual Effect						
Independent Variable	Coefficient	Standard Error	t	P>t	R <sup>2</sup>	F-stats
Indist	0.0079	0.01499	0.528806	0.6249	0.065341	0.279636

Interestingly, the most surprising aspect of this regression is in the second stage estimation results where the coefficient of distance against export value supposes to be negative as proven by numerous studies. However in this case, it bears a positive sign which means even the distance increase by 1%, the export value still increase by 0.0079%. Fortuitously, the probability value is exceeding rule of thumb of 0.05 confident levels which is not significant and independent variable is not able to explain dependent variable.

A diagnostic testing on econometrics' problems has been conducted to test the existence of multicollinearity, heterokedasticity and serial correlation. According to Montgomery (2001), Variance Inflation Factor (VIF) values should be less than 5 or 10 to prove that the regression coefficient does not suffer from multicollinearity problem where the mean VIF value for above regression stands at 2.7 which are below 5. Next test conducted on the regression is Cook Weisberg (1983) heteroskedasticity test which carry a null hypothesis of there is no heteroskedasticity problem and vice versa for alternative hypothesis. The results of Cook Weisberg test on the regression shows a probability value of 0.6574 which is higher than 0.05 thus fail to reject null hypothesis. To complete the econometrics unbiased test, Woolridge (2002) test is conducted to test on serial correlation problem with null and alternative hypothesis are as follow; (1) Ho: There is no first order autocorrelation and (2) Ha: There is first order autocorrelation. The results of probability value stands at 0.5146 which is higher than 0.05 indicating that we are fail to reject null hypothesis thus showing the regression are free from serial correlation problem.

Thus, the diagnostic results indicates that our regression comply with the Best Linear Unbiased Estimation (BLUE) theorem by Gauss-Markov theorem as proven by previous econometrics' problems testing.

## 5. Conclusion and Recommendation

The present study was designed to see the gravity effect of export towards the top six destination countries as well as proving the theory Malaysia implementing whether it is H-O theory or Linder theory. We have used 102 observations comprising of 14 independent variables of home and destinations country in the pooled ordinary least square analysis due to violating against the panel data assumption.

Estimated results reveal that Malaysia tend to trade the most with the closest, largest and sharing similarity to us which is why our neighbor country (Singapore) are standing first the list of top six export destinations. The results also reveal that we are trading with the countries who share similar taste of product consumption to us as explained by Linder theory of trade. However, this does not mean we are not implementing H-O theory at all, it is just proving that Linder theory is more superior in explaining Malaysia trade partners rather than H-O theory.

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## Impulse Buying: What Instills This Desire to Indulge?

*Internal Motivating Factors of Impulse Buying: A Qualitative Study in the Indian Context*

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### Key words

Impulse, impulse buying, narcissism, novelty, freedom

### Abstract

**Purpose** -This study explores various internal motivating factors of impulse buying phenomenon in Indian context. This study is aimed at obtaining consumer insights, so as to provide an inclusive conceptualization of this marketing phenomenon.

**Design/methodology/approach** -Data for this research was obtained through in-depth interviews. Since, the purpose of these interviews was exploration, the researcher collected data till it reached saturation (point beyond which further research was not adding any new insights) and so there was no fixed sample size. Sampling technique used in this case is purposive sampling. A total of 56 in-depth interviews were conducted with men and women (age group 25-40 & residing or working close to malls and markets in the region). The analysis of these interviews was done using Open analysis<sup>1</sup>. These interviews were able to provide fresh, non-obvious ways of understanding the internal motivations of an impulse buyer.

**Research implications** -This study extends the existing knowledge base by establishing the significance of internal motivating factors of 'impulse buying' - happiness, narcissism, freedom and novelty. Earlier studies on 'impulse buying' have focused on external motivating factors and internal motivating factors have largely remained unresolved.

**Practical implications** -This paper provides interesting insights for retail marketers to further enhance the possibilities of impulse buying.

**Originality/Value** - Notwithstanding the addition to the knowledge base, this study is extremely significant in view of the important retail context of India. With an ever growing relevance of Indian market in liberalized global scenario coupled with predicted future of an expanding retail sector, this study suggests motivators and improved understanding of this intriguing phenomenon - impulsive buying.

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### Introduction

This research paper deals with an interesting and fascinating human phenomenon that has remained a mystery in the marketing world for long - Impulse Buying. Through many discussions with consumers, there was enough evidence for the fact that there is more to 'impulse buying' than what is currently being documented. Although retail acknowledges the pervasiveness of 'impulse buying' but the phenomenon has remained relatively less explored. This study deals with this topic in the context of Indian market. In India and in many such developing economies, today's marketing context is characterized by ever increasing aspirations and a visible willingness to spend. This is accompanied with a young consumer base, rising affluence and a burgeoning middle class. All these developments are leading to eagerness to use consumption as an expression of being. This is further fueled by the availability of products, newer retail formats like supermarkets and hypermarkets that provide much higher impetus to experiential marketing (Wu & Lee, 2015) and so impulse buying. All the preceding reasons

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<sup>1</sup> McKeone, 1995

suggest that marketers and retailers are looking for several ways to trigger (Wu & Lee, 2015) and many opportunities to cash in on impulse buying. This has been accompanied with the effort of researchers to understand this phenomenon to the core. However, the research work till now has been able to explain only certain specific aspects of the phenomenon. To the best of researcher's knowledge, no research work this far has given a comprehensive picture of motivators of the phenomenon. Many studies have discussed external motivators of the phenomenon (Rook, 1987; Liang & Meng, 2008; Bloch et al. 1991; Valdez et al., 1994 & Mattila et al., 2008). Internal motivators like self-esteem (Verplanken et al., 2005), autistic stimuli (Piron, 1991; Silvera et al., 2008), excitement (Hirschman, 1985) & a way to relieve unpleasant mood (Elliott, 1994) have also been discussed. However, this research takes it a step further by looking into the deep seated internal drivers of 'impulse buying', which have more relevance in today's time when Indian society is set to demand a 'rethink' on individualism vs. collectivism.

Hence, this research seeks to obtain an insightful understanding of complex issues, which may not be otherwise apparent. Further, owing to significant cultural, social and economic differences from the west (Ramachandran, 1980; Kaur and Singh, 2007), it became imperative to identify factors that have a bearing on 'impulse buying' in Indian context.

Inspired by grounded theory (Glaser & Strauss, 1967), in-depth qualitative study (Malhotra, 2004) was carried out to understand 'impulse buying' process, uncover motivations for indulging in impulse buying and gratifications sought therein.

In the current case, the philosophical assumption is "knowledge is in the meanings people make of it; knowledge is gained through people talking about their meanings" (Creswell, 1998). Based in psychology, such qualitative studies focus on individual's understanding and his/her experiences. Further, the use of open-ended questions and probing gave participants the opportunity to respond in their own words. This also helped them give their own description of the phenomenon in question. In addition, this study was grounded in reality so that factors come from individual's conscious (Sayre, 2001) and subconscious thinking.

Extensive literature review was the starting point of this study and was done to delve into the existing discussions and motivating factors that are associated with impulse buying. This was followed by in-depth interviews that further unveiled myriad motivating factors (internal) associated with impulse buying.

## Literature Review

The 'negative' and 'bad' associations with 'impulsive' aspect of consumer behavior (Terry, 1988) make this research even more captivating. This phenomenon of 'impulse buying' generates a lot of interest among retailers, consumer groups and researchers but it still remains a concept without clear theoretical construction. This section explores various literary discussions and research on impulse buying. This part of research paper begins with revisiting the idea of 'impulse', so that it provides an interesting prelude to the discussion on 'impulse buying'.

### Impulse

The core meaning of impulse is 'akrasia' or 'weakness of will', for which, there is rich philosophical literature, beginning with Plato and Aristotle. This akrasia is "free, intentional action contrary to the agent's better judgment" (Owens, 2002). However, this qualification of 'contrary to better judgment' needs a deeper probing as many research studies discuss the 'rational' aspect of impulse buying (Sneath et al., 2008; Rook et al., 1995; Iyer, 1989). Impulsive behavior has been a target of philosophical discussion for many years now and is a central theme of the legend of Adam and Eve (Ainslee, 1975), and the focal point of fables such as "The Grasshopper and the Ant" (Rook, 1987). Freud's pleasure principle (Freud, 1950) has a distinct approach, which provides a clear understanding of 'impulse'. He interpreted impulses as

products of two competing forces, the pleasure principle and the reality principle. The pleasure principle encourages immediate gratification but is compromised in so far as a person responds to reality principle's tendency towards rational deliberation. These two forces often compete, because impulses encourage action without careful consideration about the objective environment, and with little or no regard for potential realistic consequences.

With this understanding of 'impulse' as the backdrop, the forthcoming section discusses the quest of this research - impulse buying.

### Impulse Buying

Although impulsive behavior can occur in any setting, consumer impulse buying is an extensive everyday context for it. In the modern marketplace, spontaneous urges to buy and consume often compete with the practical necessity to delay the immediate gratification that buying provides. The documented research on impulse buying dates back to 1950s, wherein, initial explanation of the phenomenon was provided by Strotz (1956) in his 'discounting model'. He suggested that impulse buyers discount the future at too rapid a rate. Thus, the benefits of the desired object at the point of imminent purchase outweigh the future problem of paying the bill. After this, many definitions of the phenomenon have been proposed and discussed. Rook's (1987) definition of impulse buying provided a comprehensive picture of the phenomenon and was inclusive of quite a few discussions on the topic till then - "when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately". This definition provided a thorough picture of impulse buying and more recently Clinton et al. (2013) took it a step forward and suggested that impulse buying is "a sudden, hedonically complex purchase behavior in which the rapidity of the impulse purchase precludes any thoughtful, deliberate considerations of alternative or future implications". These definitions provide an extensive picture of 'impulse buying', but the role of motivating factors, both internal and external, need to be researched more to make the definitions more elaborate.

The forthcoming portion of this review deals with various internal motivating factors associated with impulse purchase.

### Internal motivating factors

These are factors that relate to internal thought processes of the shopper. People can suddenly experience the urge to go out and buy something, with no direct visual confrontation (Verplanken & Herabadi, 2001). This sudden urge to buy something can emanate from various thoughts such as self-discrepancy (Verplanken & Sato, 2011), defined as a difference between actual self and ideal self (Wicklund and Gollwitzer, 1981) or a strong urge to bolster self-image (Dittmar, 2005; Sharma et al., 1997). As a result of this strong internal urge, people did more impulse buying and they regretted it more. This suggests that there is a continuum from ordinary to excessive impulse buying, with 'need to bolster self-image' being one of the major underlying motivators of this behavior. The existing studies do not explore it fully and this needs to be delved in detail.

There is an interesting perspective of unplanned shopping in past research. It also suggests that people buy products not only for what they can do but also for what they mean (Levy 1959). This aspect of considering products as 'symbols' of being and consumption as an indicator of being, took on a new facet wherein researchers started studying 'hedonic consumption'. This perspective of 'hedonic consumption' has been linked with impulse buying by many researchers (Hirschman and Holbrook, 1982; Herabadi, 2009). However, the perspective of 'hedonic consumption' stays incomplete till the deep seated internal motivators stemming from hedonic desires are delved further.

Interestingly, as a type of internal stimuli, Piron (1991) recognized the role and importance of autistic stimuli in motivating impulse purchases. Autistic thoughts can possess great evocative

power (Hirschman 1985) and can possibly lead to impulse buying. The power of this specific kind of stimuli has not been discussed much but it merits a stronger research. Another factor that has been found to influence impulse buying is 'affect' (Silvera et al., 2008). When asked to name the single mood that most often preceded an impulse purchase, respondents most frequently mentioned "pleasure" followed by "carefree" and "excited" (Hirschman 1985). In particular, people who feel happy may be disposed to reward themselves generously and to feel as if they have freedom to act (Rook and Gardner, 1993; Kalla and Goyal, 2010). It can also be seen as behavior often motivated by attempts to cheer up self or be nice to self (Mick and Demos, 1990). This behavior emanating out of wish to gratify self seems to have a stronger underlying motivation that needs to be explored further. Self-regulatory resource (Muraven et al., 1998) availability is considered an important element in determining when and why people engage in impulsive spending. Self-regulatory resources are conceptualized as a generalized pool of energy that allows people to overcome incipient urges and substitute a desirable behavior for an undesirable one (Baumeister and Vohs, 2004).

In the present context, with the increasing popularity of online buying, time and distance do not remain barriers anymore, the perspective of 'self-regulatory' resources gain more importance and need to be relooked at in the sight of massive retail proliferation and online buying.

This part of the research paper provided literary coverage of the topic this far and author's views on the gaps in existing literature. This provided necessary background for discussion with consumers, as discussed in the following sections of the paper.

### **Research Methodology**

The exploration into this phenomenon was achieved through Consumer Depth Interviews. Initial interactions with consumers and literature indicated that impulse buying was considered normatively wrong (Rook & Hoch, 1995). So, the researcher was concerned not to pre-empt the content of the research and wanted to facilitate respondents' ability to be reflective and open in expressing their feelings and emotions without self-censure or inhibition about how others may perceive them. This was done in an effort to minimize socially desirable responses. Keeping the above in view, accompanied shopping, shop exit interviews and group discussions were considered and ruled out. The first two techniques seemed likely to encourage posturing and post-rationalization respectively as it would be difficult and time consuming to build up the necessary rapport and trust to overcome such behaviors. Since the purpose was to encourage disclosure of behaviors, in-depth interviews, in a setting that encourages consumer's psychological comfort, seemed appropriate. The interview is a uniquely sensitive and powerful method for capturing the experiences and lived meanings of the subject's everyday world. In addition, these interviews aimed at understanding the meaning of central themes of the subject's lived world, along with words, interviewer also paid attention to facial expressions and bodily gestures. The researcher guarded against direct cuing in of the phenomenon of impulse buying (Sarkar, 2014). This increased the duration of interview and average duration of depth interviews was about one hour and ten minutes.

These depth interviews were conducted in consumer homes at the time that seemed appropriate for a thorough and uninterrupted discussion. In this case, the interview was not strictly structured and nor was it completely non-directive. Respondents were probed by a highly skilled interviewer to uncover underlying motivations, beliefs, and feelings on the topic.

### **Sampling**

As suggested earlier, there was no fixed sample size and the researcher continued expanding the sample size until data collection revealed no new data (Douglas, 2003).



The sampling decision was made with an explicit purpose of obtaining a rich source of information. Variation at this stage of research was ensured through purposive sampling, to get viewpoints of people with varied characteristics (Riffe et al., 1998). The power of purposive sampling lies in selecting information rich-cases for in-depth analysis related to the central issues being studied. Purposive sampling is particularly relevant when research is concerned with exploring the universe and understanding the audience. Hence, the purposive sample for this study was drawn from individuals and settings that are 'naturally' involved in the process of 'impulse buying'. Criterion sampling, a specific form of purposive sampling, which involves searching for cases or individuals who meet a certain criterion (Palys & Atchison, 2008), was used. The sample composition was men and women, age group 25-40, proximity (< 5 kms) to malls and markets in the region. Fifty-five interviews were done in national capital region of India.

### **Data Analysis**

Interviews were recorded and transcribed. This helped in analyzing the tone and pauses of respondents. Rigor and discipline was applied in data analysis without necessarily transforming the data into quantitative expressions.

Open analysis (Mc Keone, 1995) was used for analysis of qualitative data. The purpose was to understand meaning of the text through interpretive procedures. Traditional content analysis (e.g., Belk) and template-based analysis (Crabtree and Miller, 1992) were excluded. Open analysis is a form of content analysis, which aims to identify the messages and subject matter within the text. It is different from prescriptive analysis wherein the context is a closely defined set of communication parameters (e.g. specific messages, subject matter). With this perspective, statements made by respondents were analyzed for their significance with respect to their role in the act of impulse buying. This process of open analysis followed a procedure similar to the one discussed by Strauss & Corbin (1990) for open coding. Conceptual labels were placed on actions and emotions expressed in words and other instances of phenomena.

### **Results and Discussion**

The presentation of interpretation of the qualitative data will, where appropriate, make reference to the earlier literature. The themes that emerged out of this research will be discussed in the following paragraphs

#### **Inherent motivators of impulse purchase**

There is a certain sense of urgency that precedes the act of impulse buying and this unthoughtfulness is usually characteristic of situations where a person anticipates distraction or gratification in the form of excitement or pleasure. This perspective of 'impulse buying' preceding intellect was observed based on *rason d'être* that consumers suggested as their motives to indulge in impulse buying. The following part of the research paper gives a thorough interpretation of consumer interviews.

#### **Celebrating self**

There are moments in one's life that are characterized by wish to be pleased about one's own existence. This, sometimes, is due to certain long awaited achievements, a sudden sense of victory and sometimes there are no specific reasons. These are moments of overpowering urge wherein the phase of planned thinking is taken over by a wish to gratify oneself. Impulse buying 'for self' becomes a solution in these situations and post purchase justification stands on the premise of 'treat' for self. This self-gratifying behavior is linked to self gifts (Mick & Demoss, 1995), goods that a person buys to tell oneself that 'one is special'.



### *A more 'playful' consumer now*

Positive changes in the domains of economy and rising upper middle class (in India) have had a bearing on the consumer who is more playful than ever. Consumer in India, is now tasting abundance in resources as well as choices, and as a result, consumption is the new language of expressions that one is learning and this has led to shedding of many inhibitions that were earlier holding her back from exercising her 'free will' in the scenario of buying. Therefore, this destabilized sense of formality is making him/her more prone to impulse buying and consumption paradigm is increasingly becoming 'why not' instead of 'why'.

This phenomenon of consumer's playfulness in the context of consumption has been accompanied by changing 'spending' paradigms. Compared to the past where it was all about limited resources, uncertainties of future earnings due to changing government policies and limited opportunities, today the consumer is more confident wherein the consumer sentiment now is "I can, so I choose to" and changing paradigms of spending can be described through - "Every time you spend, you grow compared to past where every time you spent, you shrank" (M, 38)

The playfulness of consumer with respect to consumption can be further described in terms of much lower sense of time and consequences wherein life is thought of in terms of flow and not stock. This fluidity has a bearing on consumer's decision-making style, and in many respects, it is becoming a life of 'here and now' rather than that of 'tomorrow will be better'. This gets a further support from the changing Indian view of wealth wherein agendas 'live for today' and 'save for tomorrow' coexist. This view has led to much reduced 'consumer guilt' that had made impulse normatively wrong for a very long time in the past.

### *Treat for the narcissist*

Narcissism (Freud, 1911) is a set of character traits concerned with self admiration, self-centeredness and self-regard. Narcissism is different from other major defensive strategies or solutions in that it is not compensatory and unlike self-idealization, it tends to be a product of indulgence rather than that of deprivation (Bernard, 1988). While virtually everyone can be claimed to possess some degree of narcissistic traits, but some people are more likely to exhibit this trait (Sturrock et al., 1998).

This research took it a step further and after certain discussions, this link between narcissism and impulse buying was probed. In some consumers, it came through that there is a certain sense of belief that one has grown up and has become a 'special' person. The ability to buy something without much planning, is soon becoming affirmation of the 'special me'. This 'special me' tends to become a strong motivation for impulsive action in the buying scenario. These narcissistic desires tend to guide thoughts and actions of a person who is persistently in search of reassurance through self-enhancement.

### *Consumer Confidence - a strong factor that makes an allowance for impulse in buying scenario*

Consumer confidence is on rise and is much higher compared to the century that has gone by. This rise in consumer confidence and so a positive view of the future, has manifested itself in ways that have led to an upsurge in many facets of modern living and consumption is certainly one of them.

With a strong and supporting economy, impulse is no longer seen as a leakage in the control. In addition, it is also not seen as a lapse in regulatory mechanisms of self. Hence, it can be said that impulse in buying scenario is becoming more legitimized now.

### *In-control vs. surprise*

There is paradox between working towards being 'in control' & increasingly strong desire to be 'surprised'. However, both co-exist. As we are working towards seeking more control over our world, subconsciously we are always waiting for pleasant surprises. This

tension between control and surprise sometimes gives way to impulsive action. Hence, the tendency to seek surprises automatically bends him/her towards novelty and makes him/her a novelty-seeker.

### **Shopping now is not considered a chore**

With enticing new age retail; shopping is becoming more of a pleasurable activity. There are many mentions of it being seen as a 'break' that is welcome in the busy lives. This 'relaxing' break (Park, E.J., et al., 2006) becomes a motivation for stepping out and 'shopping'. It tends to provide a self-justifiable stance to the need for respite from routine or more bothering acts and situations of daily life.

### **Momentary fulfillment of unconstrained self - Freedom**

The work, family and other life requirements tend to weigh down on people, giving them a feeling of constrained existence. However, the strong internal motivation of being 'free' tends to show up in many day-to-day activities and interestingly shopping is one of them. Earlier research studies have mentioned that impulse buying comes through as an act of freedom within a restricted situation (Thomson et al., 1990). This research corroborates this finding and extends it further in light of modern retail setups with seamless displays, trial rooms, non-interrupting sales people, and self-service that tend to give a feeling of free access to the best in life. There are times when one wants to invest in and nurture a sense of an independent and experimental self, free from obligations to others and given roles. Impulsiveness plays that nurturing role in such situations. To capture and recapture these emotions, people make these visits to shopping malls and other markets which may culminate into impulse buying.

### **Exclusivity - a strong driver of impulse**

Exhibitions and similar display of exclusive products generate a sense of 'be the first one to own' (Aruna et al., 2015) and this leads to unplanned buying decisions. His/her novelty-seeking behavior tends to drive him further towards 'new and different'.

### **Conclusion and Future Research Directions**

This research paper extends the existing knowledge base by introducing the relevance of newer motivating factors associated with impulse buying phenomenon. This becomes important because the published research work on 'impulse buying' does not discuss internal motivating factors of impulse buying. Hence, this paper introduces and discusses the internal motivating factors viz. 'happiness', 'narcissism', 'freedom', and 'novelty' that are felt and experienced internally. These factors have not been researched in the context of impulse buying till now and this paper is the first attempt to suggest a possibility of a link between these factors with the same. This research also supports and extends the findings of Rook (1987), Goldenson (1984), Mele (1987), Stephen & Loewenstein (1991), Kivetz & Simonson (2002), Ramanathan & Menon (2006), Kalla & Arora (2011), and Kchaou & Amara (2014).

This research, essentially qualitative in nature, proposes these internal motivating factors of impulse buying. There is a need for quantitative verification of these proposed links. In addition, this research does not take into account, the opinions of people who heavily focus on online buying. An exploration into online platform, especially where many limitations of offline retail with respect to impulse buying viz., time and distance, critics and co-shoppers and physical sense of parting with money are not there.

In addition, the incidence of impulse buying in 'haats and bazaars<sup>2</sup>' is there and with increasing earnings in rural India, this trend of impulse buying is on rise. This research does not cover these areas and shopping formats. It will be an interesting contribution if these are explored further.

With increasing shopping freedom among teens and pre-teens, the possibility of 'impulse buying' stands expanded and needs to be explored in-depth from the perspective of above suggested age groups.

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<sup>2</sup> Indigenous shopping formats in India

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# The global financial crisis and US housing policy

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## Key Words

Financial crisis, Mortgage Finance, Mortgage-backed Securities, Housing Policy

## Abstract

*In the post-war period, the standard of living in the US has increased significantly, and more than two-thirds of families have achieved the American Dream of homeownership. The recent sub-prime mortgage and financial crisis resulted from a perfect storm of bad housing policy, real estate speculation, and necessary monetary policy. A healthy future for the financial markets depends on effective reforms and institutions to regulate financial instruments with limited government manipulation.*

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## 1. The Past

The current US housing market evolved from a rich history over the past five hundred years. Historically land has been the source of power and wealth. Thousands of years ago power often was acquired by conquering other peoples. The victors would take control of the land, and enslave the people or tax them to support the conqueror. The Pharaohs of Egypt, Nebuchadnezzar, and the Caesars of the Roman Empire followed this pattern.

In most of the world before 1700, land ownership was claimed by the king or emperor who had the military power to keep it. As the Roman Empire lost power, fiefdoms and city-states of Europe started to develop into nations. Kings controlled the land, and they awarded use of some lands to loyal noblemen who would support the king with taxes and military service to fight off enemies. The noblemen would develop lands for farming or other uses, sometimes using tenant farmers or sharecroppers. Surviving kings were those who could manage the land and people under their control to acquire enough power to fight off any enemies, both foreign and domestic.

During the 1600s in England, there were essentially two classes of people: the land owners (rich) and the landless peasants (poor). There was very little opportunity for the poor to become landowners or move up the class ladder. That started to change as the Industrial Revolution developed in the 1700s and beyond, and a class of shopkeepers and craftsmen emerged. Urban centers started to grow, and there were new opportunities for some of the poor peasants from the countryside to come to the towns and learn a trade as an apprentice. Adam Smith wrote The Wealth of Nations in 1776 to explain this new environment and the market economy that was arising.

The young nations of Europe were interested in preserving their power and wealth. One initiative followed by most rulers was to explore the New World to the west to acquire new lands and the riches they expected to find there. Explorers were financed and dispatched by sovereigns to claim territory for future development. Once these land acquisitions were well established, sovereigns encouraged adventuresome citizens to relocate there and establish trading opportunities. Often these activities were done through the use of land grants to entrepreneurs or religious leaders who would marshal the resources needed and recruit people for the adventure. Often some parcels of land were awarded to these new citizens in the New World, because the opportunity to own land was a strong incentive to emigrate. After the US was established, land grants were used to encourage westward migration and the construction of transcontinental railroads.

Another very important innovation in England during the Industrial Revolution was the mortgage. Before the mortgage concept appeared, land purchases were cash transactions available only to the rich. The important innovation of the mortgage was that the purchased land could be pledged as collateral for a loan used to buy the land. The mortgage allowed the buyer to pay off the loan over time from the proceeds earned on the land over time. This important financial and legal innovation opened land ownership to the growing middle class of merchants, craftsmen, and farmers. The mortgage made possible the “American dream of homeownership”, which was promoted by the Realtors, homebuilders, and others in the residential real estate industry. (See O’Toole, 2012, pages 4-5).

During the great depression (1929-1937), incomes and employment were depressed, and housing construction was nil. Then followed World War II (1937-1945), when incomes and employment were higher, but resources were needed for the war effort. Housing construction again was restricted. In the post-war era, there was significant government policy effort to reestablish the domestic economy and accommodate the returning members of the armed forces. The Federal Housing Administration (FHA) had been established in 1934 to insure home mortgage loans with a 3% down payment. Post-war, the GI Bill was passed to provide guaranteed home mortgages for most veterans with no down payment. Federal National Mortgage Association (FNMA) was created in 1938 to purchase home mortgages from mortgage bankers, which provided lenders additional funds for more mortgage loans.

By the 1950’s the nation had a strong network of Savings and Loan Associations (S&Ls). These depository institutions had strong income tax incentives to devote 80% of their deposits to home mortgage lending, and they became the largest source of home mortgage funding in the US. The S&Ls were portfolio lenders and investors that held mortgages on their books until they were paid off. They typically made loans in the same areas where they took deposits. In addition federal law limited the interest rate S&Ls were allowed to pay in savings accounts to 5.25%, an indirect way to keep mortgage interest rates down and appeal to voters. This artificial protection of the S&L industry backfired due to the inflation and rising interest rates of the 1970s. As market interest rates increased, S&L depositors withdrew savings to invest in stock and money market mutual funds. This disintermediation of funds created a liquidity crisis for S&Ls because they had been built on a flawed system of short-term deposits and long-term loans. To attempt to shore up the S&L industry, they were allowed to use more relaxed “regulatory accounting practices (RAP) rather than “generally accepted accounting practices” (GAAP). Also S&Ls were allowed to issue Certificates of Deposit (CD) to attract new deposits at market interest rates. This patchwork of policy measures soon led to the S&L industry having more interest expense than interest income. The CD replaced the liquidity problem with a profit problem, and failure of the S&L concept was inevitable. That meant the S&L could no longer be the primary source of home mortgage funds.

The very high interest rates of the late 1970s put pressure on the S&Ls, leading to the failure or merger of many S&Ls by 1985. By 1971 Congress had reorganized FNMA and created the Federal Home Loan Mortgage Corporation (FHLMC) and Government National Mortgage Association (GNMA). These housing related agencies supported the creation of a secondary mortgage market by promoting the mortgage-backed security (MBS). The MBS was a bond sold to investors around the world, and its collateral was a pool of mortgage loans, often diversified by location and borrower characteristics. The genius of the MBS was that soon investors around the world replaced the US S&L industry as the primary source of US home mortgage loans. The secondary mortgage market was very successful until the crash of 2007, largely due to high mortgage underwriting standards, before 2000, centered on significant down payments and income requirements.

## 2. The Present

The housing bubble of 2007 was a creation of both market forces and government policy mistakes – a perfect storm. The bubble arose as US home prices increased by 39% between 2000 and 2006, and then suddenly dropped by 23% in 2007-08 (O'Toole, 2012, page 195). This roller coaster of house values was most pronounced in a few local markets.

By 2000 most US home mortgages were in pools backing mortgage-backed securities (MBS), and FNMA, FHLMC, or GNMA guaranteed most MBS. Investors around the world owned these MBS. The GNMA securities were backed by the full faith and credit of the US, but the FNMA and FHLMC securities were not. However when the MBS crash occurred in 2008, Congress stepped up to guarantee all these MBS to avoid a worldwide contagion of liquidity crisis and financial losses. In addition FNMA and FHLMC were placed in conservatorship, where they remain today. The secondary mortgage market continues to function as before with government backing.

Starting in 1992, Congress assigned the Department of Housing and Urban Development the task of increasing the homeownership rate of low and moderate Americans. Initially the target was that 30% of mortgages supported by government programs should be issued to low and moderate-income buyers. Gradually that goal was increased until it reached 56% in 2008. (See Wallison, 2015). The FHA and VA programs did serve many low and moderate-income buyers, but traditionally FNMA and FHLMC served middle and upper income buyers. To achieve the assigned goals, FNMA and FHLMC were pressured by HUD to increase their mortgage purchases of loans issued to low and moderate buyers. The only way to achieve these goals was to reduce traditional underwriting standards. Historically US mortgage lenders required a 20% down payment or private mortgage insurance. Monthly payments generally were required to be no more than 36% of monthly income (underwriting ratio).

As originally envisioned, FNMA and FHLMC programs were intended to serve middle-income homebuyers rather than the wealthy. This focus was achieved by setting a maximum loan amount for loans that could be purchased by these agencies. This limit, the “conforming loan limit” was indexed to the average new home price index published by the Federal Home Loan Bank Board, then the supervisor for FHLMC. In 1980 the loan limit for one-unit homes not in high cost areas was \$93,750. This limit increased gradually each year, reaching \$417,000 in 2007. During the financial crisis the limit was temporarily raised as high as \$729,750 in high cost areas. It is now \$417,000 and is no longer increased annually.

During the period after 2000, FNMA and FHLMC gradually relaxed their underwriting standards. By 2006 many mortgages had no down payment and no verification of income. In many cases it is impossible to determine actual underwriting ratios. Many of these loans came to be called “sub-prime” mortgages because they fell below the time honored standard for “prime” mortgage loans. The rating agencies continued to rate almost all MBS as AAA, their highest score, because US home mortgages had an excellent record of very few losses, largely because historically significant down payments and underwriting ratios had been the norm.

The availability of mortgages with such relaxed standards added to the speculative mania that developed during 2003-2006. Much of this speculation occurred in four popular resort and retiree areas: Phoenix, Las Vegas, Southern California, and South Florida. These were the areas where the housing bubble increased the most and fell the hardest.

For these reasons, during the period 1990-2003 FNMA and FHLMC produced an increasingly risky portfolio of mortgages and MBS. (See Acharya, 2011, Chapter 2). By 2003 the speculative rise in real estate prices attracted additional mortgage lenders. Wall Street firms entered the mortgage market to package mortgages into “private label mortgage-backed securities” (PLS). Many of the mortgages in PLS were not eligible to sell the FNMA or FHLMC

because of low down payments or underwriting ratios. Most of the PLS were rated AAA by the rating agencies, and investors around the world accepted them as similar to MBS guaranteed by FNMA or FHLMC. The volume of PLS increased from \$1 trillion in 2003 to \$2.5 trillion in 2006. By contrast, since 1990 FNMA and FHLMC issued between \$2 and \$3 trillion of MBS each year. So while FHMA and FHLMC were increasing the risk in their portfolio, the rise of PLS added even more risk to the mortgage market. (See Acharya, 2011, pages 42-43).

The rapid rise in house prices during 2000-2006 resulted from both demand and supply factors. A very important supply factor was the set of land use controls, set-asides, green spaces, and nature preserves adopted in many places. These policies are usually claimed to protect nature and prevent "urban sprawl", but their effect is to reduce supply and raise land prices. Some counties in California have set aside more than 50% of their land area as green space where no development is allowed. Boulder, Colorado has set aside a green belt around their developed area, although the town is located next to a national forest of 1.5 million acres. (O'Toole, 2012).

Supply of houses is somewhat inelastic because it takes time and investment of resources to produce new homes for sale. Demand for houses can change quickly in response to changes in interest rates or consumer sentiment, but supply is almost always much slower to respond to market conditions. The result of this condition is that either increased demand or reduced supply tends to increase market prices sharply. We see in places where land use controls have been used extensively that house prices have increased much more than median incomes over many years. (O'Toole, 2012).

Demand factors also contributed to the sharp rise in house prices. During 2000-01 the US had a recession, and the Federal Reserve responded with reduced short-term interest rates to spur economic growth and job creation. After much criticism in 2002 about the "jobless recovery", the FED continued the record low interest rates of 1% until July 2004. Then the FED gradually raised interest rates to 5.25% by July 2006 (in 17 consecutive steps of 0.25% at each meeting of the Open Market Committee). The extended period of 1% short term interest rates allowed adjustable rate mortgages to be issued with very low initial monthly payments. These payments often were lower than rent, and they attracted many marginal buyers, investors, speculators, and borrowers with falsified loan applications. Then when the FED started raising rates to 5.25% in June 2004, the attractiveness of the adjustable rate mortgage gradually was eliminated. Mortgages issued during 2002-2005 reached their annual adjustments and the monthly payments were adjusted upward to reflect rising market rates and the phasing out of temporary interest rate buy downs many loans had featured. These rising monthly payments started the process that would chase investors out of the market, slow the appreciation of house prices, and bring the speculation in houses to an end.

During the early 2000s there arose a growing speculation in housing, especially in certain resort areas popular with retirees and vacationers. Due to FED policy mortgage interest rates were very low, and the use of adjustable rate mortgages made it possible to structure a loan with monthly payments less than typical rent. Speculators were drawn into this market. Developers moved to develop single-family homes and condominiums, especially in Phoenix, South Florida, Southern California, and Las Vegas. By 2005 it was not unusual for proposed condo projects to sell out in a few days, long before construction began. Many buyers were buying not for shelter, but to resell at a quick profit. House prices rose rapidly, drawing more buyers into the market. For the ten-year period ending in 2006, US household mortgage debt increased from 54% of GDP to 89% of GDP (Acharya, 2011, page 44).

By July 2006 the FED had lifted short-term interest rates to 5.25%, and the terms on ARM mortgages became less friendly to speculators who were facing annual adjustments. Monthly



ARM mortgage payments increased, and the flow of new buyers into the market slowed. Soon a few speculators began to have trouble selling their properties, and mortgage delinquency rates started to rise. In 2007 MBS investors around the world took note of the rising delinquency rates, although Moody's and the other rating agencies had rated most MBS AAA. In 2008 the MBS market crashed as MBS investors sought to sell their securities, and few were buying. At one point Merrill Lynch sold some MBS for 22% of face value. Lehman Brothers failed in the spring of 2008, and by fall of 2008 the FED and Treasury facilitated several large mergers and emergency liquidity measures. The mergers included JPMorgan with Chase and Bank of America with Merrill Lynch. The FED created eight "lending facilities" to provide liquidity to various segments of the financial markets when bank financing was essentially frozen. The FED was successful in restoring liquidity to the banking system. The damage done to the housing markets was more severe and is taking much longer to recover.

### 3. The Future

The future of US home mortgage finance is uncertain. Congress and the Obama Administration have discussed several alternatives for mortgage policy, but other issues have diverted policy attention away from the mortgage market. FNMA and FHLMC continue to be under conservatorship. The federal government provided \$186 billion to shore up these quasi-government agencies, and they have returned to profitability. To date the federal government, as majority shareholder, has received more than \$200 billion in dividends from FNMA and FHLMC, with none of it credited toward the debt. There have been proposals to shut down these agencies, merge them, or convert them to a fully private status. None of these proposals seems to have significant support at this time. (See Department of the Treasury, 2011).

An important lesson of the sub-prime mortgage bubble is that politically motivated housing policy increases risks to the housing markets and the taxpayer. Some political leaders continue to support policy measures to promote homeownership. FNMA and FHLMC have recently reduced the required down payment to 5% on some mortgages they buy. (See Watt, 2014). Some housing programs have required that low-income housing be included in new developments. Very recent initiatives by the Justice Department are focused on achieving desired levels of diversity within neighborhoods. In spite of the evidence from the sub-prime crisis, the lessons have not been widely understood.

Long-term increases in the standard of living, including housing status, can be achieved only through economic growth and rising productivity. Factors driving these measures include education, jobs growth, and a positive climate for investment and production. Policy measures in these areas are much more likely to support the long term housing goals of all Americans.

### 4. Recommendations

The role of government in housing and mortgage finance should be limited to current programs. These include the FHA mortgage insurance, the VA loan guarantee for veterans, and the home mortgage interest deduction. Housing assistance programs such as various FHA financing programs for multi-family and Section 8 rental assistance should also be continued.

The future role and structure of FNMA and FHLMC needs to be determined. Many argue that these agencies should be privatized, and others want them restored to their former central position in the housing finance system. They have played a very important role in standardizing mortgage instruments and procedures, but they also have crowded out private firms from this market. A solution most likely would involve capping FNMA and FHLMC loans to the lower 30% to 50% of the market based on loan amount. Explicit federal backing of these agencies with a cap on their loan amounts, as is in place now, would gain support from those seeking a strong federal role in low and moderate income housing, and also could

promote the development of a private sector MBS market in serving middle and upper income home buyers.

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## Performance evaluation of mutual funds in Oman: An investors' perspective

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### Keywords

Mutual Funds, Fund Performance, Sharpe ratio, Treynor ratio, Jensen Alpha, Systematic Risks.

### Abstract

*Mutual Funds as one of the investment options have not been very popular particularly in the Middle East countries in spite of huge investment potential. Investors in the region have long been skeptical of the safety and returns of the investment options as the awareness about investment has been low for most of the investors of the region. This study aims to analyze the performances of mutual funds in Oman on the basis of risk and return criteria using different tools such as Sharpe ratio, Treynor ratio, and Jensen Alpha. The basic objective of the study is to provide to the investors a comparative study of the performances of the various mutual funds on offer in Oman and give an insight about the possible good choices to invest. The study concludes that mutual funds in Oman during the last five years have been performing consistently and earning good returns for its investors.*

### 1. Introduction

Mutual Fund pools the saving of a number of investors who share a common financial goal. The money thus collected forms a fund which is invested in a cross section of industries and sectors. Mutual fund investment follows the principle of diversification as it reduces the risk and brings in better returns as all securities do not move in the same direction and in the same proportion at the same time. The profits and losses are shared by the investors in proportion to their investments. Thus increasingly mutual funds have become the most suitable instrument to the common man as it offers an opportunity to invest in a diversified, professionally managed basket of securities at relatively low cost.

Mutual funds in Oman were launched for the first time in the year 1995 when the financial markets in Oman reached a maturity stage. Presently there are around 17 mutual funds in operation and three of them are sharia compliant funds. One of the funds, Tilal Fund, is a real estate fund and the sixteen others are focused on investment in the equities either listed at Muscat Securities Market (MSM) or in GCC countries. All funds provide an investment alternative for the residents in Oman. With the recent decline in oil prices across the globe, there is a subsequent decline in the economic performance of the financial sector in the entire Gulf Cooperation Council (GCC) countries. This has directly affected the investment climate and thus also the performance of the mutual funds. Mutual fund industry in Oman is well regulated by the Capital Market Authority (CMA) which keeps on bringing legislations for the protection of the investors. The main objective of all the funds in Oman is to attain long term capital appreciation in addition to dividends payouts for its unit holders.

Global Investors, especially Omani investors need to know whether Mutual Funds in Oman are performing as per their expectations or not and what the future hold for them by investing in these mutual funds.

## 2. Literature Survey

Measuring the performance of mutual funds has been the focus of numerous researchers all over the world since the concept of mutual fund evolved. The first such significant study was undertaken by Treynor (1965) wherein he hypothesized the concept of reward to volatility ratio as a methodology for evaluating mutual fund performance. This study was followed by Sharpe (1966) who gave 'Sharpe Index' as a measure which takes into account both risk and return. Capital Asset Pricing Model (CAPM) was used as a performance measure by Jensen (1968). Market indices as a proxy for the market to compare and measure mutual funds' performance were proposed by Carlson (1970). Later Kane and Marks (1988) developed conditions under which Sharpe measure would correctly and completely capture market timing of the fund managers. In later years' researchers focused on other factors which greatly affected the performance of mutual funds like size of mutual fund, characteristics of fund managers, investment style, transaction cost, and timing of investment. Researchers like Chen et al (1992), Ang et al (1998) and Golce (1996) established that there exists a positive relationship between the size of mutual funds and their performances. However, Grinblatt and Titman (1992) did not find any relationship between the size of mutual funds and their performances. Shukla and Inwegen (1995) in their research agreed that local fund managers outperform as compared to international fund managers as they have superior knowledge about local environment.

Research conducted by Ang et al argued that three basic characteristics of fund managers – risk taking abilities, insight into critical information, and personal superior skills of evaluation, are crucial in the performance of mutual funds.

Performance of mutual funds is directly affected by the investment style of the fund managers was established by Indro et al (1998) who also agreed that consistency in investment is a crucial aspect of investment style. Mc Clarnon (2004) established that performance of the MF has direct bearing to the timing of the mutual fund in financial markets. Many researchers like Blake *et al* (1993); Carhart (1997) Elton *et al* (1996) and Liljeblom and Loflund(2000) have hypothesized that there exists a link between performance of MF and its transactional cost called expense ratios. They agreed that when fund managers pursue an aggressive policy, they need bigger teams for research and this increases the transaction costs thus influencing the profitability of the mutual funds.

Merely understanding and calculating the performance of a mutual fund does not guarantee an investor that the performance of the MF will improve in future or at least continue to be the same. Mutual fund performances are not guarantee of continued future returns too. Several researchers such as Blake *et al* (1993), Bogle (1992), Brown and Goetzman (1995) and Brown *et al* (1992) have raised doubts on the ability of mutual funds to perform better in the future, based on their past performances.

However, Carhart (1997), Gruber (1996), Ippolito (1992) and Capon *et al* (1994) in their research have argued that the past performance of MFs does indicate clear future performances. In fact Goetzman and Ibbotson (1994) in their researches clearly indicate that past performance of any mutual fund for the last two years clearly predict the future performance of the mutual fund for at least next two years. The question is whether investors can rely on performance evaluation indices of MFs, to be assured of future good performance of the MF in which they have invested.

## 3. Objective of this Study:

The objective of this study is to:

- Analyze the quarterly performance of equity based mutual funds in Oman which were launched before 2012 using established tools and techniques.

- Study the relationship of NAV of all mutual funds with market based index (MSM)
- Evaluate and recommend which mutual funds hold more potential for investors in Oman.

#### 4. Methodology:

This research is poised on the quarterly NAV data of mutual funds available in the website of Muscat Securities Market ([www.msm.gov.om](http://www.msm.gov.om)) from the year 2011 till Sept 2015 (the 3rd quarter of 2015). For the analysis of the data following techniques / instrument are used:

- Average quarterly return
- Total and market risks.
- Risk adjusted Performance.

The selected funds are analyzed using the above mentioned instruments and other statistical tools to determine their performances and rank them in order of the best performing MFs.

#### 5. Results of Analysis:

The entire collected data was analyzed using the tools and the results obtained from them are discussed below

##### 5.1 Average of Quarterly Return

Based on the average of the quarterly returns, Table 1 shows the MFs arranged in accordance to the average quarterly returns and shows that Oryx Fund, Vision Emerging GCC Fund, and Vision Real Economy Fund are the top three performing funds.

Funds	Ave Return
Oryx Fund	2.292%
Vision Emerging GCC Fund	2.270%
Vision Real Economy Fund	1.662%
United GCC Fund	1.515%
First Mazoon Fund	0.192%
Vision Emerging Oman Fund	0.147%
Oman Al Arabi Fund	-0.043%
Majan Capital Fund	-0.449%
Investment Stabilizer Fund	-1.206%
Muscat Fund	-1.232%
Al Amal Fund	-2.276%

Table 1 : Quarterly Average Return

##### 5.2 Total and market Risks

Risk and volatility are important indicator to judge the performance and selection of the mutual funds. Table 2 shows the two types of risks- total risk and market risk.

Vision Emerging GCC Fund, Oryx Fund, and Vision Real Economy Fund are the top three funds showing higher degrees of volatilities as indicated by the standard deviation calculation given in the table

Table 2 indicates Vision Emerging GCC Fund, Oryx Fund, and Al Amal Fund are having higher beta values but with lesser R-square values. Though, these funds are riskier than others, their variations are less dependent on market variation. On the other hand, United GCC Fund is having its beta as 1.13 but 74.248% of its variation is explained by the market variations.

It can be noticed that beta values of the three funds are also among the highest indicating their sensitivity with the market fluctuations. However, their  $R^2$  values ( $0 \leq R^2 \leq 1$ ), which are not high, indicate that a significant portion of funds' returns do not depend on the market but are explained by the respective fund managers' decisions making skills.



ds	St. Dev.	Beta	R <sup>2</sup>	P-value
Vision Emerging GCC Fund	10.384%	1.252	50.099%	0.00069
Oryx Fund	8.703%	1.218	67.486%	0.00002
Al Amal Fund	8.457%	1.186	67.824%	0.00001
Majan Capital Fund	8.401%	1.176	67.561%	0.00002
United GCC Fund	7.614%	1.130	74.248%	0.00002
First Mazoon Fund	8.053%	1.093	63.538%	0.00003
Vision Real Economy Fund	5.670%	1.075	55.283%	0.00026
Investment Stabilizer Fund	6.358%	1.026	89.823%	0.00000
MSM	5.872%	1	1	
S&P GCC	9.087%	1	1	
Muscat Fund	5.865%	0.994	98.981%	0.00000
Oman Al Arabi Fund	6.751%	0.960	69.735%	0.00001
Vision Emerging Oman Fund	8.488%	0.893	85.490%	0.00000

Table 2 : Total Risks and Market Risks of Mutual Funds

The last column of Table 2 shows the P-values for testing the following hypotheses for betas of all the chosen funds.

H<sub>0</sub>:  $\beta = 0$ , against

H<sub>1</sub>:  $\beta \neq 0$

As per the P-values mentioned in the above table, the null hypotheses for all the funds are rejected and, therefore, the betas of the funds are not zero.

### 5.3 Risk Adjusted Performance:

It is a fact that all investments have inherent risk, leaving risk free investments. The returns and risks are quantifiable and can be analyzed using historical data. Investors and fund managers seek suitable indicators to project the funds' return and risks associated to them. The past performances of mutual funds are not definite indicators for the future results. However, some clues can be found about quality of funds if correct performance measuring tools are applied. This section will use the following measures to measure the past performances of the selected funds using:

- i. Sharpe Ratio
- ii. Treynor Ratio or Reward to Volatility Ratio
- iii. Jensen Alpha or Ex-Post Alpha

In calculation process, the annual risk free return is assumed to be 5% based on the government of Oman bonds during the last ten-year period. It is reduced to quarterly risk free return by using the following formula.

Annual risk free return = 5%:

$$\text{Quarterly rate of risk free return: } R_f = (1 + 0.05)^{\frac{1}{4}} - 1$$

$$R_f = 1.05^{0.25} - 1 = 0.0122722 = 1.22722\%$$

#### 5.3.1 Sharpe Ratio

Sharpe ratio (William Sharpe 1966) is one of the most used tools in measuring performances of securities or funds because it is very simple to calculate and comprehend. The Sharpe ratio shows the ratio extra return one takes by holding a riskier portfolio. It is calculated as:

$$\text{Sharpe Ratio} = \frac{(R_p - R_f)}{\text{St. Dev.}}$$

Where:

- $R_p$  : Expected portfolio return  
 $R_f$  : Risk free return  
**St. Dev:** Standard deviation of the fund.

The following table (Table 3) lists the mutual funds in Oman ranked on the basis of the Sharpe ratio

Funds	Sharpe ratio	Rank
Oryx Fund	0.122	1
Vision Emerging GCC Fund	0.100	2
Vision Real Economy Fund	0.051	3
United GCC Fund	0.038	4
First Mazoon Fund	-0.129	5
Oman Al Arabi Fund	-0.188	6
Vision Emerging Oman Fund	-0.190	7
Majan Capital Fund	-0.199	8
Investment Stabilizer Fund	-0.383	9
Al Amal Fund	-0.414	10
Muscat Fund	-0.419	11

Table 3: Ranking of Funds According to Sharpe Ratio

### 5.3.2 Treynor Ratio or Reward to Volatility Ratio

Treynor ratio also uses the same concept of measuring the performance of portfolio by measuring the excess return against the systematic risk, the un-diversifiable risk. The ratio uses beta which measures the volatility of the portfolio or security against the market. The beta of the market is one.

$$\text{Treynor Ratio} = \frac{(R_p - R_f)}{\beta}$$

Where:

- $R_p$  : Expected portfolio return  
 $R_f$  : Risk free return  
 $\beta$  : Beta value of the fund.

Funds	Treynor Ratio	Rank
Oryx Fund	0.009	1
Vision Emerging GCC Fund	0.008	2
Vision Real Economy Fund	0.004	3
United GCC Fund	0.003	4
First Mazoon Fund	-0.009	5
Vision Emerging Oman Fund	-0.012	6
Oman Al Arabi Fund	-0.013	7
Majan Capital Fund	-0.014	8
Investment Stabilizer Fund	-0.024	9
Muscat Fund	-0.025	10
Al Amal Fund	-0.030	11

Table 4: Ranking of Funds According to Treynor Ratio

Rankings of the funds, as shown in Table 3 and Table 4, with respect to two ratios-Sharpe that indicates the security risk adjusted return, and Treynor ratio showing market risk adjusted return, indicate that top 5 funds are the same. This means that fund managers of the respective

funds managed both the risks over the selected period of study efficiently and as a result gave reasonable good return to the investors. It is also noticeable that Oryx Fund manages security risk more efficiently than the Vision Emerging GCC Fund. The efficiency of handling portfolio risk of Oryx Fund is 22% more than Vision Emerging GCC Fund ( $\frac{(0.122 - 0.100)}{0.100} \times 100$ ). However, managing the market risk, Oryx Fund is 12.5% more efficient than Vision Emerging GCC.

### 5.3.3 Jensen Alpha or Ex-Post Alpha

One of the main tenets in financial analysis is that the higher return is expected from the riskier security or portfolio as an investor will only be willing to invest in securities or funds if he or she is well compensated with the risk involved in it. Jensen Alpha (Michael Jensen, 1968) measures risk adjusted performance of a security or portfolio comparing the return with the expected return on the basis of Capital Asset Pricing Model (CAPM).

Jensen alpha formula is given below:

$$\alpha = R_p - [R_f + \beta_p (R_m - R_f)]$$

- $R_p$  : Expected portfolio return  
 $R_f$  : Risk free return  
 $\beta_p$  : Beta value of the portfolio or fund.  
 $R_m$  : Average return of the market

The higher value of the alpha indicates that the fund has earned more than what was predicted by applying CAPM.

In Table 5, the difference between average return and expected return using CAPM generates Jensen alpha. It is also evident from the table that the first four funds' Jensen alpha values are significantly large taking into account of their expected returns using CAPM. These show very noticeable achievements of the funds especially when the funds have had negative expected returns, higher values of beta with lower values of  $R^2$ . All this signify that the funds were managed very efficiently.

Funds	Ave Ret	Ex Ret (CAPM)	Jenson alpha	Beta $\beta$	$R^2$
Vision Emerging GCC Fund	2.27%	-1.11%	0.034	1.252	0.501
Oryx Fund	2.29%	-1.05%	0.033	1.218	0.675
Vision Real Economy Fund	1.66%	-0.78%	0.024	1.075	0.553
United GCC Fund	1.52%	-0.88%	0.024	1.13	0.742
First Mazoon Fund	0.19%	-0.81%	0.01	1.093	0.635
Vision Emerging Oman Fund	0.15%	-0.44%	0.006	0.893	0.855
Oman Al Arabi Fund	-0.04%	-0.56%	0.005	0.96	0.697
Majan Capital Fund	-0.45%	-0.97%	0.005	1.176	0.676
Investment Stabilizer Fund	-1.21%	-0.69%	-0.005	1.026	0.898
Muscat Fund	-1.23%	-0.63%	-0.006	0.994	0.99
Al Amal Fund	-2.28%	-0.99%	-0.013	1.186	0.678

Table 5: Ave. Ret., Exp Ret., Jenson Alpha, Beta, and  $R^2$

Table 5 above shows the ranks of the funds according to Jensen alpha values. The first five ranked funds based on their values of Jensen alpha are the same funds that maintained the first

five positions when they were ranked according to Sharpe and Treynor ratios, refer to Table 3 and Table 4.

## 6. Conclusion

Based on the analysis of the mutual funds in Oman with respect to their performance the researchers are able to conclude that MFs in Oman still are one of the most viable options for the Omani residents and for the international investor who wish to park their funds in these avenues.

This analysis shows that Vision Emerging GCC Fund, Oryx Fund, Vision Real Economy Fund, and United GCC Fund have been very efficiently managed by their fund managers who are experts and understand Oman and other GCC markets very well. Both the aspects, i.e. risk and return, have been fairly handled with high level of consistency over the period 2011 to 2015.

Majority of mutual funds in Oman have a positive Jansen Alpha ratio indicating the very good performance even in the uncertain environment leading to higher risk scenario. With the changing scenario of the global economy due to oil price crash, it remained to be seen and analyzed whether these mutual funds will be able to maintain and sustain the good performance they have achieved in the last five years. The researchers are of the opinion that mutual funds still remain a safe bet for most of the retail investors in the Oman and it is one option worth looking into for future investment portfolio diversification and formulation.

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## Public devices entrepreneurship and employment in the industry in Algeria

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### Keywords

Entrepreneurship, employment, public device, unemployment, cluster

### Abstract

*The company is the basic unit of wealth creation, employment and innovation. Encouraging its creation is to implement the conditions for its development and especially its sustainability. In Algeria, the liberalization of the economy and trade, the agreements with IMF, the free trade agreements, led to the proliferation of private companies and especially the microenterprises. These companies which are not integrated into an economic strategy and not enough prepared, are suffering from a lack of competitiveness.*

*Our work demonstrates that there is no link between job creation and these enterprises, so we conclude that these public devices haven't solved the unemployment problem. We have used for this demonstration the Moran test that shows us whether or not there is a tendency to clustering and then we locate significant clusters by Kulldorff Scanning Method.*

### Introduction

Economic growth depends on the creation of enterprises which in turn is an important source of job creation. In Algeria, since the second half of the eighties, the non-hydrocarbon industry experienced deindustrialization due mainly to the lack of investments and the effects of the measures of the Structural Adjustment Program implemented (SAP) during the 1990s (devaluation, liberalization of prices, lack of credit and privatization of public enterprises). At the end of the SAP, there was not a lot of enterprises created neither in the public sector nor in the private one. In this situation, the government has implemented an employment policy which focused on supporting the creation of microenterprises. This assistance takes the form of tax reduction, facilitation of obtaining credit, interest-free credit, access to business premises etc. The aim of this policy is above all to eliminate the imbalance of the industrial labor market.

#### I. The situation of industrial small and medium-sized enterprises in Algeria

Job creation is intimately linked to the growth and entrepreneurship. The latter can't exist without the creation of new businesses. In Algeria, until the 1990s, the creation of companies was essentially in the public sector and mainly confined to non-strategic areas. From the middle of this decade, under the aegis of international financial institutions (IMF and World Bank), measures to support the private sector have been taken as investment codes promulgated in 2001 and 2006, privatization of public enterprises and liberalization of foreign trade. All these encouragements were all factors that have favored the emergence of a business class that can be categorized in small rather than medium enterprises.

It seems important before continuing our analysis on SMEs to give their definition according to the Algerian 01-18 act of 21<sup>st</sup> December 2001 on the orientation and the promotion of SMEs. This law defines them as: "any company producing goods and / or services:

- Employing 01-250 workers
- Whose annual turnover does not exceed 2 billion dinars

A survey conducted by the National Statistics Office (ONS) in 2011 identified 934,250 economic entities existing at the national level. These entities are mainly concentrated in the urban areas (over 83%) in the private sector (almost 98%) and over 78% were created since 2011. The majority of these companies were born thanks to public measures to help the creation of companies set up from the 2000s, privatization of public enterprises or partnership with foreign companies including *Greenfield* and *Brownfield FDI*.

The table below shows the predominance of enterprises in services. Services (provided to households and businesses) experienced a strong growth during the second half of 2000s, driven by food services and those related to the development of telecommunications and health.

Table 1: Evolution of the number of companies by sector

	1995	%	2000	%	2004	%	2011	%
Industry	36285	10	43721	9,84	46991	18,02	95445	6,58
Building	16010	4,41	18674	4,20	72869	27,96	9117	0,62
Services	183461	50,54	224385	50,52	102841	39,46	829688	57,22
Including Commerce	127234	35,05	157392	35,43	37954	14,56	515700	35,56
Total	362990	100%	444172	100%	260655	100%	1449950	100%

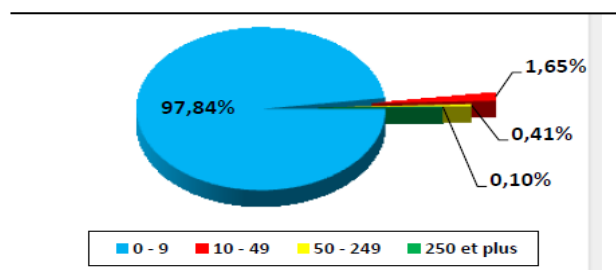
Source: Data from the Ministry of SMEs and crafts, CNAS(National Social Insurance Fund) and ONS

The industrial sector<sup>2</sup>, supposed to play the role of leverage in overall growth and innovation in particular, recorded a very low rate of business creation or stagnation until 2011. This phenomenon was first the consequence of deindustrialization as a result of the implementation of the SAP, trade opening with the corollary expansion of imports, and secondly, it was due to the concentration of the resources in the energy sector and unproductive sectors (such as infrastructure, related to Keynesian stimulus programs).

The service sector of the Algerian economy is not a post-industrial sector as in the developed economies where it is induced by labor productivity gains and demand for services, rather it reports to a stylized fact in the developing countries according to [Kalantzis 2005]. A stylized fact that he relates to an asymmetric sectoral development..

Concerning the size of these companies, we notice that they are mostly very small with a small staff of no more than ten workers. These small companies represent over 97% of all the entities, while 932 enterprises with a staff of 250 and more represent only 0.1% of the total.

Graph 3: Distribution of enterprises by slices of staff



Source: Data from the National Statistics Office (NSO), 2011

The distribution of firms by annual slices shows that nearly 8.6% of the companies activating in the industry have an annual turnover lower than twenty (20) million dinars and those with a turnover greater than two (2) billion dinars represent only 0.4% of companies. Within this activity, companies with a turnover below 20 million dinars represent

almost 84% of the total of this class, while only 0.4% has annual revenues exceeding 2 billion Dinars. Within this last installment, it is, however, the industrial companies that occupy the first place with a rate of 44% of companies, followed by construction and services.

**Table No. 2:** Distribution of industrial companies according to turnover

Turnovers in industry (million dinars)	Number of companies	Of total enterprises	On total industry	Including manufacture eraindustry
<20million DA	80029	8.60%	83.80%	78992
20-200000000 DA	1 3047	1.70%	1 3.2%	11747
> 200 million DA	1946	0.2%	2.03%	1297
> 2 billion DA	423	0.05%	0.44%	300

Source: Ibid

Geographically, the imbalance in the distribution of firms in the country is as important as that which characterizes sectors. Thus, over 66% of businesses are in the North, and the North Center alone counts more than 34% of the total. Some wilayas, like Algiers, Tizi Ouzou and Bejaia totalize more than 17% of all the enterprises and over 53% of the industrial companies. Highlands, represented by the wilayas of Setif, Batna and Msila essentially come second.

**Table 3:** Distribution of industrial enterprises by region

REGION	Number business	Industrial companies		
		Number of Companies	In% of total enterprises	As% of total industry
NORTH CENTRAL	309830	32650	3.49%	34.2
NORTH WEST	166632	16563	1.77%	17,35
NORTH EAST	141090	15454	1.65%	16.20%
HIGHLANDS	236515	23088	2.47%	24.20%
GRAND SUD	80183	7690	0.82%	8.05%
<b>TOTAL</b>	<b>934250</b>	<b>95445</b>		<b>100%</b>

Source: Ibid

All wilayas, without exception, have a commercial vocation, industry ranks third behind the services. Thus, for the majority of wilayas, trade is the activity that characterizes more than 50% of companies, with the services the rate is over 80%. The leading cause of this situation is the expansion of trade opening induced by the free trade agreements that Algeria signed: the Free Trade Agreement with the European Union and with the Arab countries (AFTA: Arab Free Trade Area). It is basically importing of finished products and reselling them without any transformation or any value creation.

L R. Elizondo and Krugman (1992) have, from the example of Mexico (considered as the largest urban center), established a strong link between the formation of these "giant cited" specialized in the exporting of manufactured products and the model of import substitution rather than a more open trade which, in contrast, tends to reduce them. Thus, according to these authors, specialized in economic geography, there is a greater concentration of manufacturing companies realizing scale economies, where the State opts for a political orientation of the economy towards the domestic market. The agglomerations are built from the interaction of factors such as economies of scale, the size of market and transportation costs.

In 2007, the Department of holdings and Investment Promotion (MPPI), has in the "preliminary draft White Paper" on "the strategy and stimulus policies and industrial development" published in 2007, raised the issue of the need for an industrial policy: should it

retain a targeting policy to develop branches and measures to accompany or implement an institutional environment conducive to free enterprise creation?

To alleviate this situation, the authorities have implemented a set of business creation schemes to boost growth and employment.

## II. Public devices creation of businesses

From the beginning of the 1980s, it was noted a slowdown in the investment in all areas and particularly in industry. This slowdown is justified by the public authorities in the fact that the leftovers to make development plans are too large, so it seemed more rational to finalize them before new spending. Moreover, the process of the falling of oil prices began in the same period and reinforces the government in this decision, which will result in reduced growth and employment.

The situation will further worsen with the implementation of the conditionalities of the Structural Adjustment Program of the 1990s, imposed by the international financial institutions in return for the rescheduling of external debt. Among the conditionalities which had disastrous effects on the economy we can point out the devaluation of the exchange rate, price liberalization and privatization. Thus, despite several reforms undertaken by the authorities for the recovery of the national economy, the growth situation and employment remains fragile. To remedy this situation, a package of incentives for the creation of businesses and jobs mechanisms were put in place by the government since the 1990s.

The purpose of these devices was the reduction of unemployment increasingly affecting young people who could not find jobs because of the investment falling and the cessation of the activity of many public enterprises during this period.

The improving of the financial situation of the country induced by rebuilding foreign exchange reserves at the beginning of the 2000s, encouraged the authorities to initiate Keynesian stimulus plans, articulated around the construction and especially infrastructure. The aim of these plans is to boost growth and consequently employment through facilitation measures for job creation (microcredit, tax incentives etc.) including jobs for young graduates.

It is in this context that the three most important incentive schemes for the creation of activity were implemented. These are the CNAC (National Unemployment Insurance Fund), created in 1994 and ANSEJ (The National Agency for the Support of the Young people Employment) established in 1996. More recently, in 2004, another agency the ANGEM (National Agency for Microcredit Management) was created.

All these devices have a common objective to encourage, support and assist unemployed young entrepreneurship project leaders. They cover (for ANSEJ and ANGEM) all phases of creation, launch and expansion of the business and all areas of economic activity.

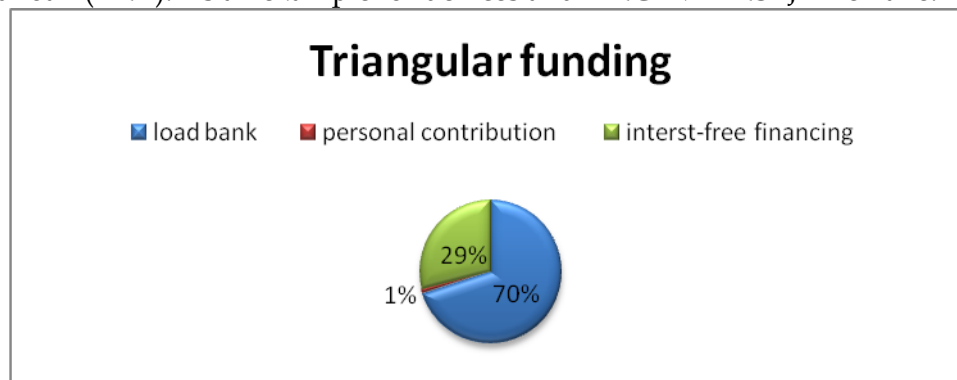
**Table 2: Summary of criteria and advantages of job creation schemes**

Device	CNAC	ANSEJ	ANGEM
<b>Creation date</b>	1994	1996	1999
<b>Age</b>	35-50 Unemployed	19-35 Unemployed	18 years and over Low income
<b>Areas of activity covered</b>	All activities	All activities	All activities
<b>Tax incentive</b>	VAT exemption (For goods and services) Customs duty at 5%	VAT exemption (for equipment) Customs duty at 5%	VAT exemption (for equipment) Customs duty at 5% Exemption from property tax (for 3

			years)
<b>Type of Funding</b>	Triangular	Triangular	Triangular
<b>Interest rate subsidies</b>	interest-free financing	interest-free financing	interest-free financing

Source: Table prepared from information of various devices sites.

Funding for projects in those three devices is triangular-type: personal contribution, bank credit and unpaid loan (PNR). As an example for devices and ANGEM ANSEJ <sup>4</sup> we have:



Source: ANGEM and ANSEJ data

The two most important devices (ANGEM and ANSEJ) are characterized by a concentration of activity in industry, agriculture and building. Concerning ANGEM the creation of activity concerns more trade and services (especially transportation and catering). In terms of number of projects for both devices for the years 2012 and 2013, the data shows some stability in the creation of ANSEJ projects and for all sectors. The same trend is also observed for the ANGEM device. This stability while the number of business start-ups has increased over the period is explained by the death of some SMEs (8% in 2015).

Mortality affects all sectors but particularly services, industry and construction. Several causes are behind the disappearances: existence of strong competitiveness in some sectors (services), use of traditional management methods that are ineffective as soon as the number of staff exceeds a certain threshold, research of easy gains and short-term opportunities, lack of market research which can offer insight into the most promising sectors in the long term etc.

### III. The creation of jobs

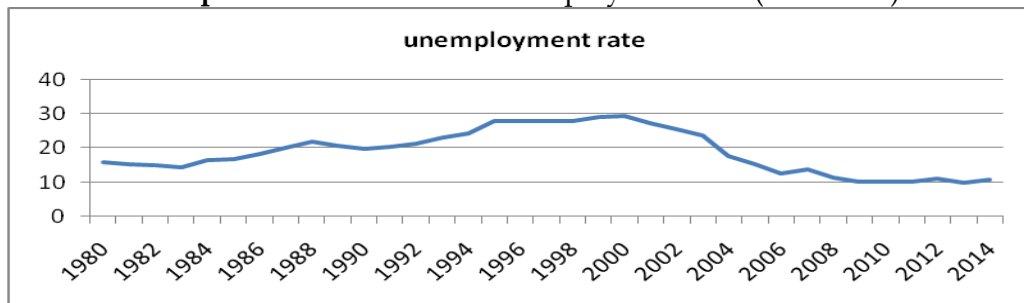
There is no doubt that economic growth is the main source of jobs, and we cannot conceive of job creation without enterprises creation because the development of human capital is the main engine of economic growth.

In Algeria, job creation has experienced contrasting trends over the past three decades. During the 1980s, job creation was mainly the result of the implementation of development plans focused on the industrialization of the 1970s. The 1990s were conversely marked by a decline of jobs caused by the decline in investment and the closure of businesses mainly due to the implementation of the SAP. The improving of the financial situation of the economy due to the rise in oil prices during the 2000s has pushed the authorities to remediate the imbalance in the labor market expressed by a very high unemployment rate. Thus, medium-term development plans of infrastructure spending, financed by the state, will be launched: the first in 2001, this is the plan to support economic recovery; the second in 2005, the additional Economic Recovery Plan; a third in 2009 and finally the 2014's plan is in current realization.



All these plans aim to create direct and indirect jobs by stimulating the creation of companies in infrastructure-related sectors. These plans have certainly helped to reduce the unemployment rate, but it remains high and marked by a change in its structure.

**Graph 5: Evolution of the unemployment rate (1980-2014)**



Source: data of the National Statistics Office

The analysis by age and gender enables us to further identify the population which is the most affected by unemployment. The data indicates that the segments most affected are those of [15-24] and [25-35ans] and especially women.

For the category of unemployed youth, the graduates and particularly university graduates are most at risk of unemployment. The reason for this phenomenon is that the labor demand from a low capital intensive productive sector do not require a high level of qualification. According to the 2012 IMF report on employment in Algeria, the private sector has not been able to create enough skilled jobs; in addition there is a distribution of students in favor of sectors such as law, social science and education that do not meet the needs of this sector.

As reported earlier, it is mainly the sectors of services and public works which employ the active population.

**Table 6: distribution of employment by activity in 2012**

Activity	GENDER		TOTAL
	Male	Female	
Agriculture	12,60%	6,5	11,7
Extractive industry	2,10%	0,9	2
Manufacturing	9%	27,1	11,8
Construction	22,5	1,7	19,4
Commerces and services	53,7	63,9	55,4
<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: National Statistics Office

Furthermore, the creation of jobs by incentive schemes for the creation of enterprises remains very low and is characterized by job insecurity due to the death of these companies.

**Table 7: Evolution of creating job by microenterprises**

	Jobs created by SEA microenterprises
2001	2 3800
2002	28400
2003	28100
2004	19100
2005	36500

Source: Ministry of Industry

About this kind of job, its cost is relatively low when it is the result of the insertion devices while their cost is very high when it comes from credits granted to business creation.

#### IV. Statistical detection of the aggregation of industrial enterprises in Algeria

A cluster is a spatial organization defined as an aggregate, a case of grouping close to each other; the proximity being defined in the sense of geographical distance. The methods of local detection of cluster identifies the cases of incoherent clusters under the null hypothesis of no clustering and evaluates their level of significance while global detection methods studies the spatial correlation and detects the trend of clustering.

The purpose of this work is firstly to test the trend of clustering for employment's projects and industrial's projects funded by ANSEJ using the Moran's test and secondly locate significant clusters by Kulldorff scanning's method.

The Moran's test is based on Moran's statistics which measures the similarity between neighboring spatial units, its interpretation is similar to that of a correlation coefficient (Gaudart (2007)). The spatial autocorrelation is positive when the values high or low of a variable tend to cluster in space and is negative when spatial units are surrounded by neighbors with very different values for the same random variable. The determination of spatial interactions requires defining links of neighbourhood between the spatial units. All of these links is summarized in a matrix  $W = [w_{ij}]$  called proximity's matrix. Each term  $w_{ij}$  indicates how two regions  $i$  and  $j$  are spatially arranged. In the framework of this work, the proximity's matrix used is adjacency matrix because the only information available is the geographical origin. It is defined by:

$$w_{ij} = \begin{cases} 1 & \text{if wilaya } i \text{ has borders with the wilaya } j \\ 0 & \text{otherwise} \end{cases}$$

It was assumed that the wilaya  $i$  has no borders with itself implying  $w_{ii} = 0$ .

#### Moran's test

The test is based on statistical called Moran's index denoted  $I$  and defined by:

$$I = \frac{1}{w_+} \cdot \frac{\sum_{i=1}^{i=K} \sum_{j=1}^{j=K} w_{ij} (y_i - \bar{y})(y_j - \bar{y})}{\sum_{i=1}^{i=K} (y_i - \bar{y})^2 / K}$$

Où  $K = \text{number of spatial units}$

$w_{ij} = \text{elements of the adjacency matrix for the regions } i \text{ and } j.$

$$w_+ = \sum_{i,j=1}^K w_{ij}$$

$y_i = \text{value of the variable for the } \textit{r} \acute{e}gion \textit{i}$

$$\bar{y} = \frac{\sum_{i=1}^{i=K} y_i}{K} = \text{average of observations on the } K \text{ regions}$$

So the statistical  $I$  is a random variable. Under  $H_0$ ,  $I$  follows a normal distribution asymptotically identical regardless of the spatial unit ( $I \rightarrow N(m, \sigma^2)$ ) with :

$$\hat{m} = -1 / (K - 1)$$

$$\hat{\sigma}^2 = \frac{(K^2 \cdot \frac{1}{2} \cdot \sum_{i \neq j}^K (w_{ij} + w_{ji})^2 - K \cdot \sum_{i=1}^{i=K} (w_{i+} + w_{+i})^2 + 3w_+^2)}{(K - 1)(K + 1)w_+^2} - \hat{m}^2$$

$$w_{i+} = \sum_{j=1}^K w_{ij}, w_{+j} = \sum_{i=1}^K w_{ij}$$

$I < 0 \Leftrightarrow$  Negative spatial autocorrelation, so neighboring spatial units are different.

$I \simeq 0 \Leftrightarrow$  there's no correlation between the neighboring spatial units, and spatial model is perfectly random.

$I > 0 \Leftrightarrow$  The neighboring spatial units are similar (there is a pattern in the form of a Cluster of spatial units).

In the latter case, it would be interesting to identify potential clusters.

The scan statistic is one of the methods of local clustering of cases detection; some spatial units can be homogeneous in terms of creation of industrial projects or jobs and constitute a cluster. This approach aims to bring together the various spatial units into potential clusters.

There are different scanning methods which the spatial scan statistic Kulldorff

SaTScan software can be used to implement the spatial scan statistic. This is a software developed by Kulldorff. It will detect spatial clusters and see if they are statistically significant; he tests whether the number of cases (in our case: number of projects or number of jobs) are distributed randomly in space.

The method of spatial scanning Kulldorff remains the most used tool for identifying potential clusters.

### Application:

#### Data

The study covers 2668 jobs and 786 projects operating in the industrial sector created and funded by ANSEIJ during 2008 Data includes the number of projects, jobs, industries and the total Job by wilaya (Geographical origin). There are 48 wilaya (departments) coded from 1 to 48.

#### Methods and software

SpaceStat was used to calculate Moran's index and SatScan software to detect the existence and significance of the clusters. The application of the scan method Kulldorff ([14]) allows us to group different neighboring wilayas units into meaningful clusters..

### Results

Table 1 : Results of Tests

Variable	Moran's index	Moran's Score	Critical value	Significance level
Number of projects	0,57	6,7	1,65	5%
jobs	1,2	11,6	1,65	5%

Source : made by the authors

For both variables, Moran's index is positive and well above its average theoretical value ( $E(I) = -0.0212$ ), which induces a score higher than the critical value 1.65. Then we accept the hypothesis of spatial heterogeneity at 5% significance level. This means that projects funded by ANSEIJ and the jobs created by them are not randomly distributed over the national territory. Therefore there's a trend of clustering, then the next step will be to identify clusters using statistical scan statistic

Table 2 : Clusters of Number of jobs

Cluster	Wilayas	p-value
1	20	$<10^{-16}$
2	12, 40, 4, 24, 36, 23, 5, 21, 43, 7, 39, 19, 18, 6, 41, 34, 28	$<10^{-16}$
3	10, 35, 15, 16	$<10^{-16}$
4	26,9	$82.10^{-16}$

Source : made by the authors

Table 3 : Clusters of Number of projects

Cluster	Wilayas	p-value
1	15	<10 <sup>-14</sup>
2	33, 11, 30, 39, 47, 1, 7, 12, 4, 3, 40, 32, 5, 17, 28, 24, 25, 19, 36, 43, 23, 34, 21, 45, 8, 18	<10 <sup>-14</sup>
3	27	<10 <sup>-14</sup>
4	16	<10 <sup>-14</sup>
5	46, 22, 31, 13	45. 10 <sup>-7</sup>

Source : made by the authors

The approach Kulldorff highlights four significant spatial clusters for the variable job and five for the variable number of projects with a p-value (probability that the cluster is not significant) negligible ( $p < 10^{-6}$ ).

We observe that the clusters of employment are different from these of enterprises. So, we can conclude that there is no link between these clusters

### Conclusion

The conclusion that emerges from this analysis is that growth in Algeria is not generating enough jobs. As the statistical results shows, the two kinds of clusters we have found have no link.

Growth remains the prerogative of the hydrocarbons sector, the capital intensive sector which drains a few skilled workforces. The public measures for job creation, certainly beneficial, must take more account of market needs, but also must be oriented towards innovation in products and processes as well as in scientific and technical research. To do a rapprochement between university and companies, it is necessary for public authorities to multiply the creation of BLUE in all regions. The creation of venture capital companies should be encouraged to fund research projects.

The industry and manufacturing industry in particular whose deindustrialization process is well under way should know a turnaround by promoting local and foreign investments (FDI). The financial resources are not sufficient alone to trigger the recovery that requires the implementation of an industrial policy that should take account of the reality of the Algerian economy and should not be based on other models.

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# A parametric survival analysis of fundamental factors and sentiment index towards future stock returns: a new chapter of global financial crisis 2007

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## Keywords

Behavioral Finance theory, Sentiment, Log-Logistic Hazard Model, Weibull Hazard Model, Multiple Linear Regression Model, Global Financial Crisis

## Abstract

*The traditional financial theory was purposely invented to analyze the investment performance with the belief that the rational act of an investor could lead to decision making. Most of the theories developed came up with an assumption that the market is perfectly efficient. However, the evolution of the theory led many researchers to find evidence that the decision making process in investment activities could be influenced by the irrational behavior and psychology of an investor. This is called as Behavioral Finance Theory. In this study, linear regression model was used to investigate the effect of sentiment index and the fundamental factors towards future stock returns. Then a Parametric Survival Model by using Log-logistic and Weibull Hazard Model was used to observe the existence and the size of rational bubbles in the market. A time series analysis was performed by using monthly data of NYSE and NASDAQ from five sectors during Global Financial Crisis period (2007-2009). It was found that only 27% out of 30 companies are significant. The sentiment index showed a weak negative relationship towards future stock return while the fundamental factors showed a strong negative relationship towards future stock returns and remained the major contributing factors. Lastly, small in size of rational bubbles were found during the Global Financial Crisis 2008.*

## 1.0 Introduction

Many researchers and practitioners have developed theories and application models to appraise investment performance. Some of the financial theories that have evolved are Capital Asset Pricing Model (Sharpe, 1964), Arbitrage Pricing Theory (Ros, 1976) and Modern Portfolio Theory (Markowitz, 1952). These models are based on the concept of utilizing all the informations available in the market and by considering the rational act of an investor in the decision making process, hence indicating the market is efficient. However, researchers have yet to find the exact answer to reveal the mystery of human psychology, emotion and sentiment in influencing the decision making process. Therefore, another theory is being developed to shed some light into it which is the Behavioral Finance Theory. This theory is being evolved to understand how the investor's behavior and sentiment could influence the decision making process and to some extent how it can be used as predictor tools.

The unending debate among the researchers on whether investor's sentiment has a predictive ability towards stock returns has opened up many opportunities of expanding the epistemology knowledge of behavioral finance. Thus, many studies have been conducted to enhance their arguments by using several different proxies of sentiment extraction. Some of the sentiment proxies that were used include the surveys of investor confidence, sentiment from

market variables, news and social media, and internet message boards. In this paper, we conducted an investigation to see whether investor sentiment could influence future stock return by using a model of sentiment proxies by Baker and Stein (2004) which is the trading volume of an investor. Based on this model, investors can be categorized into two main types which are rational and over-confident investors. They believed that trading volume could be an important indicator of investor sentiment. Overconfident investors will trade more as they believe they will obtain more returns. This will push the price of stock to increase and attract more trading volume. The increase in trading volume in the market reflects the increase in investor sentiment. Therefore, this paper endeavors to investigate whether the fundamental factors and investor sentiment could influence future stock returns. This research paper consists of the analysis of the body of literature relating to the fundamental factors, investor sentiment and future stock returns, hypotheses statement, data and methodology, findings and results and lastly the conclusion.

## **2.0 Literature Review and Hypotheses Development**

### **2.1 Investor Sentiment**

A number of past literatures had conducted studies to examine whether investor sentiment has predictability power towards future stock returns. The empirical results varied depending on the choice of the investor sentiment proxy. Previously, Kim and Kim (2012) subdivided four major groups of literatures that generally tested the relationship between investor sentiment and future stock returns based on the source of sentiment information they had extracted. The four major determinants of sentiment are (1) surveys of investor confidence; (2) sentiment from market variables; (3) news and social media; and (4) Internet message boards. For the first group of papers, most of the researchers such as Otoo (1999), Solt and Statman (1988) and Brown and Cliff (2004) agreed that there were no relationship between sentiment index and future returns. The second group of papers which extracted sentiment from market variables such as Neal and Wheatley (1998), Baker and Wurgler (2006), Baker, Wurgler and Yuan (2011) and Edelen, Marcus and Tehranian (2010) generally reported that there was a negative relationship between investor sentiment and future stock returns. The third group of papers which used sentiment proxies from news and social media such as Clarke and Statman (1998) and Fisher and Statman (2000) reported there was no relation between sentiment and future returns. However, Tetlock (2007), Tetlock, Saar-Tsechansky, and Macskassy (2008) and Chen, De, Hu, and Hwang (2011) reported that there was a negative relationship between sentiment and future stock returns where negative news could forecast firms stock returns. The fourth group of papers used internet message board as the proxies for their sentiment. Wysocki (1998), Antweiler and Frank (2004) Das and Chen (2007) found that the sentiment from internet message boards could predict stock return such as abnormal, positive and negative return.

However, the focus of this paper is to extract the investor sentiment index by using trading volume as the proxy. Several researchers defined sentiment in many sensible ways. Smidt (1968) said that sentiment could lead towards speculative bubbles, Zweig (1973) stated that sentiment comes from investor's biased expectations towards asset values, Black (1986) said that sentiment is the noise in the financial markets, Lee, Shleifer and Thaler (1991) defined it as biased expectation of the investor towards stock return that is unjustifiable by fundamental values and lastly Baker and Stein (2004) defined sentiment as investor's optimism or pessimism towards stocks. In this paper, Trading Volume Index (TVI) was used as a measure of the sentiment. TVI can be defined as the average change of the trading volume per unit of time. Previous literature suggested that trading volume is the best measure for sentiment because of two main reasons; (1) it can explain the investor overconfidence's movement in the market as

stated in Baker and Stein (2004) framework. (2) Smidt (1968) and Brown and Cliff (2004) suggested that the investor sentiment's formation occur through the process of time. This study emphasizes on conducting a preliminary test in five different sectors in which different sizes of company is taken as the sample of works during the period of Global Financial Crisis (2007-2009) as the influencing event towards the movement of investor sentiment.

## 2.2 Book-to-market ratio

In this study, sentiment index is not the only concern in predicting the future stock returns. There are several other variables that is believed to have predictability power towards future stock returns. Many researchers believed that book-to-market ratio is one of the dominant determinants to predict future stock returns. Some of studies which found that book-to-market ratio can predict the market returns are Fama and French (1992) which showed that the book-to-market ratio of individual stocks had the ability in explaining the variations in stock returns and Kothari and Shanken (1997) was used a Bayesian framework to investigate the ability of book-to-market ratio to predict the market returns and found that book-to-market ratio can predict negative expected return. In contrast to those finding, Fama and French (1995) came out with another finding by which they did not find any causal link between book-to-market equity ratio as factors in earnings and returns.

## 2.3 Market Capitalization

Other than book-to-market ratio, market capitalization is another determinant that can be used as controlling variable in predicting the future stock returns. Crain (2011) found that smaller firms can predict higher return than the larger ones. Banz (1981) reported there is a relationship between the total market value of the common stock of a firm and its return and found that for the period 1936-1975, the common stock of large firms might be a proxy for risk, therefore, a potentially important return predictor. Smaller firms, in general, are much more risky compared to larger firms, leading to lower prices and higher returns.

## 3.0 Data and Methodology

### 3.1 Data collection

The data was collected from Yahoo! Finance and Morningstar (*independent investment research*) databases. The data consists of Future Stock Returns of company (dependent variable), Market Capitalization, Book-to-Market ratio and Sentiment Index (independent variables). The sentiment index was measured by calculating the changes in trading volume twice. The data comprised of five companies from five different sectors NASDAQ and NYSE market comprises of Consumer goods, Technology, Healthcare, Services and Financial sectors. The data was based on monthly basis from 1<sup>st</sup> January 2007 to 31<sup>st</sup> December 2009. To avoid bias in selecting the data, we selected the companies from three different groups which were large cap, Medium cap and Small cap. Market Capitalization and Book to Market ratio are transformed into logarithmic form.

### 3.2 Diagnostic Data

#### 3.2.1 Unit Root Test

Prior to the regression analysis, unit root test were conducted by using Augmented Dickey-Fuller (1979) (ADF Test) and Phillips-Perron (1988) (PP Test) to test the data stationary. Based on the ADF test, Futures Return and Sentiment Index for all panel data failed to reject the null hypothesis, thus indicates the data are stationary at level. Both Log Market Capitalization and Log Book to Market ratio are stationary at first difference. All the results in PP test were consistent with the ADF test for all companies.

### 3.2.2 Variance Inflation Factor (VIF) Test

The VIF test was employed to identify whether there was multicollinearity problem between all the independent variables. Multicollinearity or also known as perfect collinearity can occur among the independent variables and can cause problem to understand the significance of each variable in the multiple regression model. Thus, to avoid this problem, Variance Inflation Factor was employed to measure how much the variable contributes towards the standard error in the regression. Large VIF indicated that the multicollinearity problem is existed. The formula of VIF is as follow:

$$VIF_j = \frac{1}{1-R^2_j} \quad \text{Equation 1}$$

The  $R^2_j$  indicates the multiple correlation coefficients. When the value of  $R^2_j$  is 0, then the independent variables are not correlated. While if the VIF value is 1, it shows there is no multicollinearity problem exist in the variables. However, if the VIF value is more than 10, it indicates that there is a multicollinearity problem among the variables. Therefore, based on the results in this study, the centered VIF value were less than 10 for all companies which indicated that all the variables were free from multicollinearity problem.

### 3.2.3 Breusch-Godfrey LM Test

We employed Breusch-Godfrey LM test (1978) to detect the autocorrelation problem within the datasets. According to Gujarati and Porter (2010), this test is more general than few other tests for autocorrelation. The residual regression is shown below:

$$e_t = \alpha_1 + \beta_2 X_{1t} + \beta_2 X_{2t} + C_{1e_{t-1}} + C_{2e_{t-2}} + \dots + C_{ke_{t-k}} + v_t \quad \text{Equation 2}$$

The Breusch-Godfrey LM test results portray the serial correlation of the probability for all companies are greater than 0.05 ( $\chi^2 > 0.05$ ) which reject  $H_0$  and indicates no serial correlation existence.

### 3.2.4 Multiple Linear Regressions

To ascertain the first objective of this study, we applied the multiple linear regressions model. The empirical model is as follows:

$$\check{r}_{t+1} = \alpha + \beta_1 \Phi_t + \beta_2 \delta_t + \beta_3 \mu_t + \varepsilon_t \quad \text{Equation 3}$$

Where;

$\check{r}_{t+1}$	=	Future stock return
$\Phi$	=	Sentiment index
$\delta$	=	Market Capitalization
$\mu$	=	Book-to-Market ratio
$\alpha$	=	constant
$\beta$	=	Beta coefficient
$\varepsilon$	=	Residual term

### 3.2.5 Parametric Survival Model

In order to achieve the second objective, the Parametric Survival Model was employed. We used the Log-Logistic Hazard Model (Bennet, 1983) to detect the presence of the rational bubbles in the stock market during Global Financial Crisis 2008. Whereby, the Weibull Hazard Model (Mudhokar, Srivastava and Kolia, 1996) was used to analyse the size of the bubbles. The log-logistic survivor function is as follow:

$$S(t) = \frac{1}{1 + (\lambda t)^2} \quad \text{Equation 4}$$

Where  $\alpha = -\log \lambda$  and  $p = 1/\sigma$ . The hazard function is:

$$\lambda(t) = \frac{\lambda p (\lambda)^{p-1}}{1 + (\lambda t)^p} \quad \text{Equation 5}$$

The *logit* of the survival function  $S(t)$  is linear in  $\log t$  provides a diagnostic plot. If the straight line appears on the graph, then the survivor function is log-logistic. While the hazards itself are:

- Monotone decreasing from  $\infty$  if  $p < 1$
- Monotone decreasing from  $\lambda$  if  $p = 1$ , and
- Similar to the log normal if  $p = 1$

The Weibull Hazard Model (Mudhokar, Srivastava and Kolia 1996) is defined as:

$$S(t) = \exp(-at^{b+1}) \quad \text{Equation 6}$$

$S(t)$  is the likelihood of survival in a data set to at the time  $t$ . Therefore, the matching hazard function is:

$$H(t) = \alpha (\beta + 1)t^\beta \quad \text{Equation 7}$$

Where  $\beta$  is the duration coefficient of the hazard function and  $\alpha$  is the size or shape parameter of the Weibull distribution. The Weibul Hazard model basic idea is that of a linear function between the log hazard function and the log of duration, which can be simplified as:

$$\text{Ln}[h(t)] = \text{Ln}[\alpha(\beta + 1)] + \beta \text{Ln}(t) \quad \text{Equation 8}$$

Hypotheses to be tested were as follow:

H<sub>1</sub>: There is significant relationship between the fundamental factors and investor sentiment towards future stock return

H<sub>2</sub>: The rational bubbles are exist in the stock market during GFC 2008

#### 4.0 Findings and Discussions

##### 4.1 Results of Multiple Linear Regressions

Table 1 illustrates the results of Multiple Linear Regressions of 8 companies that showed significant relationship out of 30 companies in the sample of study. All companies displayed significant relationship towards Future Stock Return at 95% critical level except for company 124 which was significant at 99% critical level. Table 2 displays the summary of relationship between the independent variables and dependent variable. The results showed that both fundamental factors had a strong negative relationship towards future stock return. On the other hand the sentiment index only showed weak negative relationship where evidences were only found in company 105, 122 and 124 only. The results in Table 3 portrays the summary of the companies that are significant and insignificant based on different industries. Among all industries, the services sector had the most significant companies while Technology sector did not show any significant evidence. This might be due to the Technology sector which was not much affected during the Global Financial Crisis 2008 or might be due to some other reasons.



#### 4.2 Results of Parametric Survival Analysis

Table 4 specifies the test for duration dependence for Future Stock Returns based on the model motivated by Baker and Stein (2004). Based on the Log Logistic results, all companies produced negative alphas and positive coefficient of duration elasticity which indicated that the bubbles do exist and there was positive duration dependence among the companies. The gamma for the companies was less than one and indicated that the hazard rates were monotone decreasing. The LR test for the absence of duration dependence test suggested that all the companies in this group rejected the null hypothesis and concluded that there was positive duration dependence in the series of Future Stock Returns.

Weibull Hazard Model results expound the positive alpha values which indicated that the rational bubbles existence supports the findings of Watanapalachaikul and Sardar (2003) who claimed that rational bubbles were indicated when the beta coefficient is positive. The results generated from this model indicated the rational bubble's size were still small and showed no sign of bursting in the short period of time during the GFC period.

Table 1: Results of Multiple Linear Regressions

Company	Coefficient	t-stat	p-value	r-squared	F-stat
<b>101</b>					
Constant	1.357277	1.090825	(0.2843)	0.231869	2.917992 (0.050848)**
lnMcap	-0.098004	-1.758114	(0.0893)*		
lnBM	-0.210706	-2.224616	(0.0340)**		
Sent	-0.005096	-0.962653	(0.3437)		
<b>105</b>					
Constant	2.366467	2.503399	(0.0182)***	0.264835	3.482310 (0.028376)**
lnMcap	-0.132348	-2.727408	(0.0107)***		
lnBM	0.039391	0.635926	(0.5298)		
Sent	-0.010293	-1.978197	(0.0575)**		
<b>110</b>					
Constant	-3.892772	-2.894107	(0.0071)***	0.275055	3.667673 (0.023520)**
lnMcap	0.123044	2.421526	(0.0219)**		
lnBM	-0.397231	-3.246098	(0.0029)***		
Sent	0.001506	1.614345	(0.1173)		
<b>115</b>					
Constant	1.076364	1.224145	(0.2307)	0.255402	3.315722 (0.033646)**
lnMcap	-0.089144	-2.415060	(0.0223)**		
lnBM	-0.183047	-1.882209	(0.0699)*		
Sent	-0.000320	-0.213992	(0.8321)		
<b>118</b>					
Constant	1.150516	1.804394	(0.0816)*	0.263632	3.460833 (0.029004)**
lnMcap	-0.105664	-2.766966	(0.0097)***		
lnBM	-0.202291	-2.421864	(0.0219)**		
Sent	-0.000705	-0.477438	(0.6366)		
<b>121</b>					
Constant	1.378376	1.675022	(0.1047)	0.257413	3.350891 (0.032453)**
lnMcap	-0.112720	-2.408101	(0.0226)**		
lnBM	-0.205936	-2.596496	(0.0146)***		
Sent	0.001142	1.637962	(0.1122)		
<b>122</b>					
Constant	0.626834	0.884593	(0.3837)	0.227461	2.846190 (0.054834)**
lnMcap	-0.083021	-1.956748	(0.0601)*		
lnBM	-0.262299	-2.046669	(0.0498)**		
Sent	0.003447	1.706918	(0.0985)*		
<b>124</b>					
Constant	-2.525502	-2.275634	(0.0304)**	0.298041	4.104327 (0.015231)***
lnMcap	0.145069	1.872111	(0.0713)*		
lnBM	0.004801	0.045588	(0.9640)		
Sent	0.002602	2.460848	(0.0201)**		

Figure in the parentheses indicates the p-value. \*, \*\* and \*\*\* denote 90%, 95% and 99% critical value.

Table 2: Summary of Positive versus Negative Relationship

Variables	Positive Relationship	Negative Relationship
Sentiment Index	38%	62%
lnMcap	12%	88%
lnBM	0%	100%

Table 3: Results of Industry Analysis

Industry	Significant	Insignificant
Consumer Goods	2 Companies	4 Companies
Financial	1 Company	5 Companies
Healthcare	2 Companies	4 Companies
Service	3 Companies	3 Companies
Technology	0 Company	6 Companies
Overall	8 Companies (27%)	22 Companies (73%)

Table 4: Results of Parametric Survival Analysis

Code/Model	Log Logistic Hazard Model				Weibull Hazard Model			
	$\alpha$	$\beta$	$\gamma$	$H_0: \beta=0$	$\alpha$	$\beta$	$\gamma$	$H_0: \beta=0$
101	-0.4266639	0.5080211	0.0605978	(28.20)***	1.924957	0.0763697	0.1458821	(13.32)***
105	-0.4090504	0.5134788	0.0501799	(23.28)***	1.807184	0.0975212	0.1641156	(14.31)***
110	-0.3350791	0.5004538	0.0569011	(24.85)***	2.51270	0.0104096	0.0810491	(10.50)***
115	-0.2140462	0.4414599	0.1058663	(17.97)***	1.999728	0.0634909	0.1353721	(12.46)***
118	-0.3898826	0.4897584	0.0960987	(26.11)***	1.567137	0.1635444	0.2086418	(16.35)***
121	-0.3775927	0.4838925	0.0800536	(27.16)***	1.808499	0.1036901	0.1639000	(14.95)***
122	-0.4781608	0.5705871	0.0709796	(25.80)***	1.83874	0.0867776	0.1590177	(14.52)***
124	-0.5001379	0.5584854	0.0477823	(37.16)***	1.948857	0.0666445	0.1424368	(13.48)***

Notes: Figures in the parentheses are the LR ( $\chi^2$ ). \*, \*\* and \*\*\* Denote significance at the 10%, 5% and 1% level respectively. The LR statistic test for the absence of duration dependence. The Log Logistic and Weibull models, the absence of duration dependence corresponds to  $\beta = 0$  and the LR statistic is asymptotically  $\chi^2$  with 1 degree of freedom.

## 5.0 Conclusion and Recommendation

In this study, we aimed on achieving two main objectives which were (1) Forecasting the relationship between the fundamental factors and sentiment index towards future returns and (2) Detecting the existence of rational bubbles in the stock market during Global Financial Crisis 2008. We were driven to conduct the study to reveal whether the future stock return was more influenced by the fundamental values or by the behavioral element which is the sentiment of an investor. Studies on sentiments are still being debated on which proxy of sentiment should be used. Therefore in this study we used trading volume index to extract the sentiment index where Baker and Stein (2004) believed as the best measurement of the sentiment. Furthermore, to enhance the level of the sentiment, we extracted the data during the period of Global Financial Crisis 2008 that could be a great contributor towards investor sentiment activity in the stock market. We conducted a Multiple Linear Regression to examine the relationship between sentiment and the fundamental factors towards future stock return and generally found that there is a weak evidence that shows sentiment is negatively related to future stock return.

Meanwhile, Market Capitalization and Book-to-Market remained the major contributor towards future stock returns. However, less than half of the sample did not show any significant effect. The results can be concluded that the measurement for the sentiment is still debatable. We also found the rational bubbles existence during the financial crisis period even though the size was small. Therefore, the main recommendation for the next study on this area of interest is to focus more on the measurement of investor sentiment. Other than that, the period of study can be more extended into pre, during and post Global Financial Crisis.

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