

2017-08-30

# Journal of Asian Finance, Economics and Business, v. 4, no. 3

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Version	
Citation (published version):	2017. "Journal of Asian Finance, Economics and Business, Vol.4 No.3"

<https://hdl.handle.net/2144/27504>

*Boston University*

# Journal of Asian Finance, Economics and Business

# JAFEB

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## ***Journal of Asian Finance, Economics and Business Vol. 4 No. 3***

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The Journal of Asian Finance, Economics and Business (JAFEB) has been indexed in **Cabell's Directories, Crossref, and Directory of Open Access Journals**.

The Journal of Asian Finance, Economics and Business (JAFEB) is an international peer-reviewed journal and is published four issues per year quarterly in full English in joint sponsorship from the Korea Distribution Science Association (hereinafter called "KODISA") and the Institute of Economics under the Ministry of Education and Science of the Republic of Kazakhstan (hereinafter called "Institute of Economics").

The Journal of Asian Finance, Economics and Business (JAFEB) publishes four issues per year quarterly on the following dates: **February 28, May 30, August 30, and November 30**.

The Journal of Asian Finance, Economics and Business (JAFEB) is published in international standards both in print and online versions with Digital Object Identifier (DOI) information. **Print ISSN: 2288-4637 / Online ISSN: 2288-4645**

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Tel: (+82 31) 740-7292 Fax: (+82 31) 740-7361  
E-mail: kodisajournals@gmail.com.

### **Homepage of the Journal:**

For submission to the Journal, please access to <http://www.jafeb.org>

**Printed by Dunam Publishing** Tel: (+82 2) 478-2066 Fax: (+82 2) 478-2068

### **Publication Date of This Issue:**

The Journal of Asian Finance, Economics and Business Vol. 4 No. 3 is published on August 30, 2017.

### **Disclaimer:**

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Print ISSN: 2288-4637 / Online ISSN 2288-4645  
doi:10.13106/jafeb.2017.vol4.no3.5

# Financial Disclosure and the Cost of Equity Capital: The Empirical Test of the Largest Listed Companies of Kazakhstan

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Received: January 24, 2017 Revised: July 31, 2017 Accepted: August 5, 2017

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## Abstract

This study extends research into whether disclosure of corporate and financial information is associated with firms' costs of equity capital. This study sets out to examine empirically the determinants of corporate disclosure in the annual reports of 37 largest and most liquid firms listed on Kazakhstan Stock Exchange (KASE) in Kazakhstan. It also reports the results of the association between company-specific characteristics and disclosure of the sample companies. Based on the analysis of existing empirical research, the disclosure index has been constructed and regression analysis of the influence of the disclosure index on the cost of equity capital has been conducted. The obtained results show that the received findings correlate with foreign empirical studies, and the disclosure index in this sample has a negative impact on the cost of equity capital. Using cost of equity capital estimates derived from capital asset pricing model, we find that firms with higher levels of financial transparency are associated with significantly lower costs of equity capital. Economic theory assumes that by increasing the level of corporate reporting, firms not only increase their stock market liquidity, but also decrease the investors' estimation risk, arising from uncertainty about future returns and payout distributions. The results show that firms on the Kazakhstan market can reduce their cost of equity capital by increasing the level of their voluntary corporate disclosures.

**Keywords:** Cost of Equity Capital, Transparency, Corporate Governance, Information Asymmetry, Disclosure Quality, Kazakhstan.

**JEL Classification Code:** G30, M48, M14.

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## 1. Introduction

Corporate disclosure can be defined as the communication of information by people inside the public firms towards people outside. The main aim of corporate disclosure is "to communicate firm performance and governance to outside investors" (Haely & Palepu, 2001,

p.405). This communication is not only called for by shareholders and investors to analyze the relevance of their investments, but also by the other stakeholders, particularly for information about corporate social and environmental policies. The significance of corporate disclosure practices has been of growing interest both in theory and in practice. Since the stock market collapsed in 1929, regulatory efforts have pointed on limiting the firm's decision in settling the timeliness, scope, content and form of disclosure provided to equity capital market participants and others (Welker, 1995). Though, there are still noticeable differences between the disclosure levels of firms in capital markets. In all these studies, accounting disclosure plays a main role and must be measured in some way. But disclosure is a theoretical concept that is difficult to measure directly. The literature on disclosure offers a variety of potential proxies that aim to measure disclosure.

There are many reasons for which firms must have incentives to disclose information to the public. Researchers applied many theoretical perspectives in order to explain the

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phenomena of disclosure and to explain what motivates companies' managers to reveal more information than is required by legislation. However, no any single theory is available to explain disclosure phenomenon completely, and, to date, researchers tend to select whichever theory relates best with their hypothesis (Linsley & Shrives, 2000). It has been examined that increasing corporate disclosure is of great benefit to both stakeholders and the companies. From the stakeholders' perspective, disclosure will enable them to better assess the financial performance of the company and to assure them that the managers are managing companies at their best. From the companies' perspectives, disclosure gives significant messages about business performance and puts companies in direct contact with investors, which increases their confidence, and hence reduces the cost of capital (Botosan, 1997). If disclosure affects the company's cost of capital, this should put the market in a better position by keeping it informed, and hence enhancing its functioning.

The importance of corporate disclosure arises from being a means of communication between management and outside investors and market participants in general. Demand for corporate disclosure arises from the information asymmetry problem and agency conflicts between management and outside investors (Healy & Palepu, 2001). Enhanced corporate disclosure is believed to mitigate these problems (Healy & Palepu, 2001; Graham, Campbell & Rajgopal, 2005; Lambert, Leuz & Verrecchia, 2007). Companies may benefit from providing more information to the public through a reduction in their cost of capital and an increase in the pure cash flows accruing to their shareholders, consequently increasing their values. However, providing information to the public is not a costless task. Among the costs of disclosure are the costs of information production and dissemination; for example the costs of adopting an information system to collect, process data and report information about the company and the costs of hiring accountants and audits, etc.

In this study, a framework for empirical tests of the relation between disclosure and the cost of equity capital is determined. Economic theory assumes a negative association between disclosure and cost of equity capital (Diamond & Verrecchia, 1991; Easley & O'Hara, 2004). The main issues that have been tackled or are currently being tackled in accounting disclosure literature as a whole include identifying what companies are reporting, the underlying factors that may affect the extent to which information is reported and motivates companies to make particular information disclosure. While some previous studies have focused on what information is disclosed, more studies are needed to examine how information is disclosed, and to examine the potential benefits of information disclosure, for example, its impact on the company's cost of

capital. Thus, with regards to corporate information reporting, the empirical literature provides only partial answers concerning disclosure practices, its characteristics and its determinants. In addition, there is a limited research on the potential impact of information disclosure on the company's cost of equity capital. The scope of this research aims, therefore, to fill this gap in the literature.

The study of this issue is driven by the economic theory that greater disclosure lowers the information asymmetry (Glosten & Milgrom, 1985; Diamond & Verrecchia, 1991) and the estimation risk (Barry & Brown, 1985). First, disclosure reduces information asymmetry and, in turn, increases the liquidity of the stocks (Diamond & Verrecchia, 1991) and reduces the required rate of return (Easley & O'Hara, 2004). Disclosure also lowers the cost of equity by reducing the estimation risk, which is not diversifiable under certain conditions. For example, Clarkson, Guedes, and Thompson (1996) showed that if the portfolios of investors consist of many securities with a low information quality, then the estimation risk is non-diversifiable. Leuz and Verrecchia (2000) argued that better disclosure can improve the organization between firms and their investors with respect to the firm's capital investment and reduce information risk.

Lang and Lundholm (1993) showed that firms disclosing more information have more accurate and less dispersed analyst earnings forecasts. Boubaker, Gounopoulos, Kallias and Kallias (2016) analyzed how management earnings forecast disclosure to investors affects the reliability of available information and investor behavior. Welker (1995) and Healy, Hutton, and Palepu (1999) further verify that firms providing more disclosure have lower bid-ask spreads, a measure of the cost related to information asymmetry. Botosan (1997) and Botosan and Plumlee (2002) provided a direct link by showing a negative relation between the disclosure in annual reports and the cost of equity capital for firms followed by few analysts and for firms in general. Further, Sengupta (1998) stated that firms with greater disclosure pay lower costs in issuing debt.

## 2. Aims and Objectives of the Research

The aim of this study is to establish the relationship between corporate disclosure quality of companies which is measured by the disclosure index and the cost of equity capital. Quality of disclosure is measured based on a disclosure index developed from Standard and Poor's Transparency and Disclosure Survey. Further, this study aims to identify the driving forces behind the likely variable association of corporate disclosure with the cost of equity as well as contributing to the existing literature by discussing

disclosure models on their relevance in economic decision making, constructing own disclosure index for Kazakh companies and identifying its relationship with company's cost of equity capital.

The topic about informational transparency of companies for the Kazakh market is not disclosed. This study will contribute to the existing research by justifying the choice of theoretical and methodological approaches, construction of the disclosure index and the selection of factors for the model based on the specifics of Kazakhstan. We contribute to the literature on the relation between corporate disclosure and cost of capital (Botosan, 1997; Botosan & Plumlee, 2002; Hail, 2002; Francis, Khurana & Pereira, 2005) by showing that high disclosure levels are strongly associated with lower cost of capital for firms in countries with large variation in disclosure policies. Some firms may have incentives to provide disclosure levels superior to the average, while others do not. Thus, causing a larger variation in disclosure levels than those observed in countries where the general disclosure environment is superior. Previous research on this topic has been based on samples of firms from developed countries with low dispersion in disclosure levels. When a firm's environment (e.g., regulation) demands superior disclosure levels, there will be a lower variation in disclosure policies adopted by firms. As the variation in cost of capital is influenced by other factors, a lower variance in disclosure policies adopted by firms is likely to result in a weak relation between disclosure and cost of capital. We expect to see a stronger relation between disclosure and cost of capital when the cross-sectional variation in disclosure is higher.

Another objective of this research is to examine the potential usefulness of disclosure made in the annual report. Previous accounting disclosure research offered insight into the potential usefulness and perceived benefits and costs of disclosure. For example, it has been asserted that improved disclosure enhances corporate transparency, develops corporate image, and provides useful information for decision making. Disclosure can also be seen as one of the mechanisms to mitigate adverse selection by reducing information asymmetry between managers and investors. It is a mechanism to lower a company's cost of capital, increase liquidity of its shares, and lower transaction costs resulting from lower bid-ask spread. In addition, disclosure can be seen as one of the mechanism by which companies attempt to manage their stakeholders in order to gain their support and approval. Moreover, disclosure can also assist in staving off potential regulatory pressure and avoiding additional requirements.

### 3. Literature Review and Hypothesis Development

Starting with the theoretical research of Amihud and Mendelson (1986) and Diamond and Verrecchia (1991), and continuing through empirical work by Botosan (1997), evidence seems to indicate a negative association between disclosure and cost of equity capital. Botosan and Plumlee (2002) validated Botosan's (1997) findings that a negative relation exists between annual report disclosure and cost of equity capital, but also affirmed a positive relation between more timely disclosures and cost of equity capital. Piotroski (2002) explored one of these more timely disclosures by examining the effect that quarterly and annual management earnings forecasts have on short-term stock price volatility and found that forecasts seem to raise volatility in the short-term.

By revealing private information, firms try to solve the reluctance of potential investors for holding shares in illiquid markets, and thus, reduce the cost of capital. In this line, Diamond and Verrecchia (1991) showed that companies reduce the cost of equity financing by improving disclosures, which implies higher liquidity of firms' securities and increase the demand from large investors. Other benefit from improving disclosure is that by providing better information, firms try to reduce potential investors' estimation risk regarding the parameters of a security's future return or payoff distribution. It is assumed that investors attribute more systematic risk to an asset with low information than to an asset with high information (Handa & Linn, 1993; Klein & Bawa, 1976; Coles, Loewenstein & Suay, 1995; Clarkson et al., 1996). Mandatory disclosure can decrease information available in securities markets by crowding out the acquisition of private information that, through funds' trading, would be reflected in prices (George & Hwang, 2015).

From the empirical evidence, we can also refer to several studies. Botosan (1997) demonstrated that among firms attracting a low analyst following, those that present higher-quality disclosures benefitted from lower levels of cost of capital. The author used a sample of 115 firms and measured cost of capital using the residual income model. In Botosan and Plumlee (2002), they estimated cost of capital using four alternative methods, and found that after controlling firm size and market beta, greater disclosure is associated with a lower cost of capital.

The association between disclosure and firm characteristics has long been of interest to accounting researchers. The extent of corporate disclosure may be influenced by different firm factors such as financial factors, non-financial factors, social responsibility factors including firm size, industry type, listing status, leverage, performance,

ownership structure, the size of audit firm and culture. However, some of these relationships are weak and not verified in the literature. The findings of previous research provided a good starting point to further examine the relationship between disclosure and its underlying firm factors. The present research relates the level of disclosure to three firm factors namely, firm size, leverage and risk. These factors are chosen because they are the most commonly used independent variables in accounting disclosure.

Prior theoretical research supporting a hypothesis of a negative association between disclosure level and the cost of equity has followed two distinct lines of research: stock market liquidity and an estimation risk perspective (Botosan, 1997). The first stream of research suggests that companies tend to increase disclosure to overcome the reluctance of potential investors for holding their shares, thereby enhancing stock market liquidity and reducing cost of equity capital either through reduced transaction costs or increased demand for a firm's securities (Botosan, 1997). This stream of research includes Copeland and Galai (1983), Glisten and Milgrom (1985), Amihud and Mendelson (1986), Diamond and Verrecchia (1991), and Bloomfield and Wilks (2000). For example, Diamond and Verrecchia (1991) constructed a model in which they showed that revealing information can increase demand for securities by investors, thereby improving liquidity and reducing information asymmetry, hence reducing the cost of equity capital. Bloomfield and Wilks (2000) also showed that greater disclosure attracts increase demand for shares at a higher price from investors, thereby implicitly reducing the cost of capital and increasing liquidity. Amihud and Mendelson (1986) argued that the cost of equity is higher for securities with larger bid-ask spreads because investors require compensations for additional transaction costs.

The second stream of research suggests that firm enhancing disclosure is an attempt to reduce the cost of equity capital by reducing non-diversifiable estimation risk (Botosan, 1997). This second stream of research is represented by Klein and Bawa (1976), Barry and Brown (1985), and Clarkson et al. (1996). Primary to a variety of corporate decisions is a firm's cost of capital. From determining the hurdle rate for investment projects to influencing the composition of the firm's capital structure, the cost of capital influences the operations of the firm and its subsequent profitability. Given this importance, it is not surprising that a wide range of policy prescriptions have been advanced to help companies lower this cost.

Size is an important determinant of disclosure level and has been used in many disclosure studies (Singhvi & Desai, 1971; Firth, 1979; Chow & Wong-Boren, 1987; Hossain, Tan & Adams, 1994; Meek, Roberts & Gray, 1995; Raffournier,

1995; Botosan, 1997; Depoers, 2000; Abraham & Cox, 2007; Ratanajongkol, Davey & Low, 2006; Aljifri & Hussainey, 2007; Aljifri, 2008) that tested the association between disclosure and company size. Although most previous studies support a positive relationship, there is an unclear theoretical basis for such a relationship. The direction of association may be either positive or negative. Some previous studies found a negative association between size and the level of corporate disclosure (Aljifri, 2008; Aljifri & Hussainey, 2007; Kou & Hussain, 2007; Mak, 1996; Gray, Kouhy & Lavers, 1995a; Roberts, 1992; Davey, 1982; Ng, 1985; Stanga, 1976). These studies, therefore, did not support a positive relationship between size and disclosure. Thus, whether disclosure is useful in reducing the cost of equity capital becomes an empirical issue, which can be tested by using the following hypotheses.

*Hypothesis 1: There is a negative association between disclosure and the company's cost of equity capital.*

Since larger firms are more exposed to public scrutiny than smaller firms, they tend to disclose more information (Alsaeed, 2006). Furthermore, information disclosures may be used to decrease agency costs, to reduce information asymmetries between the company and the providers of funds, and to reduce political costs (Inchausti, 1997). Cooke (1992) and Cerf (1961) found the existence of significant positive association between firm size and the level of disclosure. Thus, the hypothesis 2 has been developed as:

*Hypothesis 2: There is a positive relationship between firm size (as measured by market capitalization) and the level of information disclosure.*

Fama and French (1992) and Baginski and Wahlen (2003) found a negative relation between size and cost of capital.

*Hypothesis 3: The cost of equity is negatively related to company size.*

Firms which have higher debt in their capital structure are prone to higher agency cost (Alsaeed, 2006). Information disclosure may be used to avoid agency costs and to reduce information asymmetries (Inchausti, 1997). Therefore, it is argued that leveraged firms have to disclose more information to satisfy information needs of the creditors (Uyar & Kilic, 2012). Hence, the following hypothesis 4 was formulated:

*Hypothesis 4: There is a positive relationship between disclosure level and leverage.*

## 4. Sample Construction and Data Description

The main objective of this study is to investigate whether firms that publish greater disclosure benefit in terms of a lower cost of equity capital. In this section, the research methods used to address this objective are described. First, the selection process of the sample of listed firms examined in the study is discussed, followed by a description of the process by which the main data for the analysis is collected. This includes a discussion of how financial disclosure and the cost of equity capital measures are determined. Disclosure of financial information is measured using a disclosure index developed from a content analysis of annual reports. The approach implemented in this study involves the use of a dichotomous procedure, where a particular information item is awarded one (for yes) and zero (for no) if it is disclosed or not disclosed, respectively. The level of disclosure for each firm is then calculated as the total number of items scored (total count of all the ones and zeros).

In using the disclosure index approach, it is first necessary to develop a checklist of items of information that firms disclose or may disclose (Marston & Shrivs, 1991). In this study, a checklist comprising 79 financial disclosure items was developed. Disclosure is divided into two parts: information quality and information quantity. However, in the absence of a generally agreed model for disclosure quality and lack of relevant and reliable techniques to measure it, prior studies tend to use disclosure quantity (Hail, 2002) as a proxy for disclosure quality assuming that quantity and quality are positively related, although quantity and quality measures may lead to different ranking for a sample of companies. Core (2001) proposed some ways to achieve a measure of disclosure quality. However, up to date there is no single measure of disclosure quality that does not attract criticisms (Beretta & Bozzolan, 2004; Brown & Hillegeist, 2007). Botosan (2006) claimed that quantifying the qualitative characteristics underlying disclosure quality is extremely difficult and that it would be nearly impossible to apply the procedure in an empirical setting. In sum, the academic debate on this issue is still open and scholars are invited to review the extensive research on construct measurement in other disciplines to obtain new perspectives on how to measure disclosure quality. Hence, prior studies to date tend to count information items provided in a disclosure vehicle (e.g. disclosure index and content analysis studies).

The present research attempts to measure directly the cost of equity capital through Capital Asset Pricing Model. Prior research encountered several complications in estimating a firm's cost of capital. There is considerable debate and disagreement among academics and

practitioners with respect to the magnitude of the market risk premium (Kothari, 2001). Some scholars use forecast data to estimate the future cash flows of a firm (Botosan & Plumlee, 2002), others rely on industry research reports to obtain growth estimates (Fischer, 2003), whereas more accounting-based approaches use accounting items to derive reasonable estimates. Previous academic studies have generally used ex post (average realized) returns to estimate the cost of capital and to test asset-pricing models. This study has been inspired by the fact that expected returns are not easily publicly observed. Hence, historic data was used to calculate estimates for the cost of capital.

### 4.1. Sample Selection

Initially we considered all the companies for which we have disclosure data for years 2008 and 2014. Then we have to exclude all companies for which some of the data needed in order to calculate the cost of equity capital measure were missing. The sample consists of a total of 37 Kazakh firms listed on the stock exchanges. In order to be included in this study, a firm must have a full set of financial information covering the entire fiscal year. This study aims to provide an objective view of current disclosure practices at the largest public companies in Kazakhstan. The centerpiece of this study is a comprehensive survey instrument designed to assess the level of corporate disclosure practices across firms.

### 4.2. Disclosure Data

Several items are graded in order to produce a score that measures the quality of the information provided in the annual report. Among them we found: historical data, analytical account of results, composition of shareholding, shares percentage held by the board of directors, order and clarity of the report, design, number of branches, directors' remuneration, returns on shares, market evolution, review of operations and on-line information. Each question is evaluated on a binary basis to ensure objectivity, and rankings for the three broad categories and an overall ranking is developed from the answers to individual questions. These categories broadly correspond to the analytical criteria employed in Standard and Poor's corporate governance scoring process. They address disclosure patterns along a broad spectrum of factors that affect corporate governance practices. This presentation format provides analysts and investors the flexibility to focus on specific investment analysis needs. One point is awarded for each attribute that is found to be present.

Using the content analysis method, the extent of compliance of listed financial and non-financial Kazakh



companies with the required disclosures is measured by using disclosure index. Disclosure indices are extensive lists of selected items, which may be disclosed in company report (Marston & Shrivess, 1991). Each company was scored in all applicable areas of the survey. While assessing the level of corporate disclosure for an individual company can be subjective, the survey is designed to minimize this problem. In addition to crosschecking and auditing by different raters, nearly every survey measure has been refined so as to be quantifiable. This is also a unique feature of this study, as previous research has only checked for the presence of a specific corporate disclosure measure. This study adds to the existing literature by adding a qualitative dimension to the disclosure measures. Companies that omit or do not comply with a specific scoring criterion receive a 'zero' score. Meeting the legal compliance standard and those that exceed the regulatory requirements and/or meet international standards earns a firm a score of 'one.' Once the assessment is complete, a single composite score for transparency (DISCL) is calculated by taking a sum across the scores for each question. No weighting is used so that the overall score represents a simple summation of its components suggesting that every item analyzed is equally important. If a company reports all the requested data, a total of 79 points is assigned. With these scores we have created a revelation index based on the sum of scores obtained.

Financial data used to construct control variables as well as measures of return, are taken from Bloomberg and S&P Capital IQ and analytical reports, published by Halyk Finance for Kazakh firms. Corporate disclosure variables (e.g., board composition and ownership concentration) are constructed using manually collected data gathered from annual reports and government sources.

## 5. Research Design and Methodology

### 5.1. The Model

The statistical analyses performed in the present research, includes the use of multiple linear regression models to examine the relationship between annual report disclosure level and the influencing factors. We test our hypothesis by regressing expected cost of equity capital (COE) on market beta (BETA), the natural log of market value (LMVAL), financial leverage (LEV), book to market value of equity (BM) and total disclosure score (DISCL). That is,

$$COE = \alpha + \beta_1 BETA + \beta_2 LMVAL + \beta_3 LEV + \beta_4 BM + \beta_5 DISCL + \varepsilon$$

In the present research, there are four independent variables indicating the financial characteristics of the firm whereas there are three independent variables indicating corporate disclosure characteristics of the firm. These include firm size, leverage and beta. These factors are the most commonly used independent variables in the accounting disclosure literature (Aljifri, 2008; Branco & Rodrigues, 2008; Aljifri & Hussainey, 2007; Linsley & Shrivess, 2006; Xiao & Yuan, 2007; Oliveira, Rodrigues & Craig, 2006; Haniffa & Cooke, 2005; Raffournier, 1995; Hossain et al., 1994) and will be used here for testing with disclosure. Beta and size were included in the analysis because prior research placed a control on them when testing the relationship between disclosure level and the cost of equity capital (Petersen & Plenborg, 2006; Chen, Chen & Wei, 2003; Froidevaux, 2004; Botosan & Plumlee, 2002; Hail, 2002; Botosan, 1997).

### 5.2. Sample Design

The sample size of this research is constructed by selecting firms listed on the Kazakhstan Stock Exchange (KASE). With the foundation of the KASE, equity trading started on the secondary markets in Kazakhstan and KASE is now one of the remarkable stock exchange among the Central Asian countries. There are 130 firms listed on the KASE as of 2007 and 37 of them were selected to form the sample size. Trading volume of the sample size includes 46% of the KASE's total trading volume as the year end of 2007.

To qualify for inclusion in our main sample, the minimum threshold was annual average market cap in excess of \$10 million in the seven-year time horizon given to reflect significant market volatility in recent years as a result of the financial crisis. To satisfy our liquidity criteria, a company had to be included in either the first or second trading list on the KASE, or be listed on a major international exchange. By international standards, the Kazakh stock market is modest in size. As a result, only 37 companies satisfied both criteria, and were included in the sample.

The attributes of the transparency score tables were previously created by Standard and Poor's and then customized for Kazakh firms. The database of transparency and disclosure scores consists of 37 Kazakh firms, which are the largest and the most liquid firms of the KASE. There are 2 service providing companies, 7 banks and 28 non-financial companies out of 37 firms. Transparency and disclosure attributes are divided into three subcategories; first, ownership structure and shareholder rights, second, financial information, and finally board and management structure and process.

(1)

### 5.3. Control Variables

The literature has revealed several risk factors that affect the cost of equity (Fama & French, 1992). These factors must be controlled so that a correct inference can be obtained. In this study, we control for cross-firm differences in beta, firm size, book-to-market equity and leverage. The inclusion of firm size and book-to-market equity as our control variables is motivated by Fama and French (1992). Fama and French (1992) and Baginski and Wahlen (2003) found a negative relation between Size and cost of capital. The log of the common equity of the firm scaled by the book to market value of equity (BM) is included because Fama and French (1992), Gebhardt, Lee & Swaminathan (2001), and Baginski and Wahlen (2003) found a positive relation between BM and the cost of equity capital. LEV, measured as long-term debt plus any debt in current liabilities divided by total assets, is included to proxy for the amount of debt in the firm's capital structure. Botosan and Plumlee (2002) found LEV to be positively associated with cost of equity capital. However, as our estimated cost of equity is derived from BM, it is debatable whether BM should be included as a control variable. In examining the effect of disclosure on the cost of equity, most studies (Botosan 1997; Botosan & Plumlee 2002; Francis et al., 2005) do not include BM as a control variable. BM is calculated as the natural logarithm of the ratio of the book value of equity to the market value of equity. Firm size is measured as the natural logarithm of the market value of the common shares that are outstanding in millions of U.S. dollars. We expect the cost of equity to be positively related to book to market equity and negatively related to firm size.

BETA is included in the models as a control for systematic risk. BETA is estimated by the market model using a minimum of thirty monthly return observations over the five-year period with a value weighted S&P 500 market index return. Financial leverage (LEV) defined as the ratio of total debt to market value of outstanding equity is used as proxy for a firm's riskiness (Modigliani & Miller, 1958). The higher a company's relative debt position, the more likely it will face financial distress from defaulting on interest and principal payments. BETA and LEV are included in the analysis to account for a company's systematic and financial risk. LMVAL is included to account for the richness of a firm's information environment as well as the significant association between cost of capital and market value.

## 6. Empirical Results

The firm characteristics used to describe the sample are market capitalization (firm size), beta (market risk), leverage (financial risk), and market-to-book values (growth potential). The data for these characteristics are drawn from the analytical reports and the S&P. The statistics are presented in Table 1.

**Table 1:** Descriptive Statistics

Variable	Mean	Median	Std. Dev.
MVAL	210417	1621.5	981885.12
BM	0.6773	0.9363	6.7084
LEV	0.1878	0.1415	0.1851
BETA	0.9592	0.9400	0.3778
COE	13.5318	13.6000	0.7100
DI	33.0695	32.0000	6.1072

Table 1 shows that the average firm size, measured in terms of the market capitalization, is about \$210 million. The median market capitalization is smaller than the mean at \$1.62 million. This suggests that the sample of firms also includes medium-sized firms. The table also reveals that BETA, a measure of risk for the sample of firms in the study, is 0.9592. The median of 0.94 is slightly lower than the mean suggesting that the sample includes some high and low risk firms. The mean leverage of the firms is about 18.78%, consistent with the notion that Kazakh firms generally do not rely heavily on debt financing. The median is 14.15%. The fact that the median is lower than the mean indicates that the sample includes low and medium-g geared firms. Overall, firms in the sample are lowly geared, consistent with the notion that Kazakh firms rely more on equity capital than on debt. In terms of the market-to-book ratio, the mean is 0.6773 and the median is 0.9363.

The low average transparency score for Kazakh firms is mostly due to disclosure weaknesses in operating performance, shareholder rights, and remuneration of executives and board members. Moreover, most firms in our research followed only the minimal regulatory requirements in their annual reports. Availability of English-language disclosure (which is part of our scoring criteria) is limited. On the positive side, we note the fact that all public companies disclose their financial statements under International Financial Reporting Standards and that information on key shareholders and governing bodies is generally available.

**Table 2:** Pearson Correlation

		CoE	InMC	BtoMV	Beta	DI	Lev
CoE	Pearson Correlation	1	-.111	-.208	-.303	-.160	.270
	Sig. (2-tailed)		.575	.289	.117	.415	.165
	N	28	28	28	28	28	28
InMC	Pearson Correlation	-.111	1	-.848**	-.357	-.522**	.840
	Sig. (2-tailed)	.575		.000	.062	.004	.000
	N	28	28	28	28	28	28
BtoMV	Pearson Correlation	-.208	-.848**	1	.348	.409*	.910**
	Sig. (2-tailed)	.289	.000		.070	.031	.000
	N	28	28	28	28	28	28
Beta	Pearson Correlation	-.303	-.357	.348	1	.020	-.485
	Sig. (2-tailed)	.117	.062	.070		.919	.009
	N	28	28	28	28	28	28
DI	Pearson Correlation	-.160	-.522**	.409*	.020	1	-.370
	Sig. (2-tailed)	.415	.004	.031	.919		.053
	N	28	28	28	28	28	28
Lev	Pearson Correlation	.270	.840	.910**	-.485	-.370	1
	Sig. (2-tailed)	.165	.000	.000	.009	.053	
	N	28	28	28	28	28	28

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

The results of the correlations between the financial disclosure and firm characteristics are given in Table 2. A correlation is a measure of the strength and direction of the relationship and ranges between -1 and +1. The negative and positive signs reflect the direction of the relation whilst the strength of the relation is reflected in the absolute value, called the correlation coefficient. A higher correlation coefficient indicates a stronger relationship. Examining the Pearson correlation coefficients (shown above the diagonal), we find that DI is negatively correlated with InMC, Correlation coefficient = -0.522. We find that InMC is highly positively correlated with Lev (0.840). In contrast, the correlation between DI and BtoMV is slightly lower with the coefficient of 0.409. A strong negative relationship exists between BtoMV and Lev with the coefficient of -0.910. A negative relationship exists between Lev and Beta where the correlation coefficient is equal to -0.485.

We perform a cross-sectional time series analysis of the relationship between information disclosed in company quarterly reports and cost of equity and control variables. At the first stage of data analysis, cost of equity is dependent whereas company attributes including transparency score are independent variables. The summary of data analysis regarding relationship between cost of equity and disclosure score is as follows (see Table 3).

**Table 3:** Regression Analysis, Cost of Equity is Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	40.02124	10.75945	3.719636	0.0012
LNMC	-4.949132	0.582987	-8.489260	0.0000
BTOMV	-2.142998	10.41864	-0.205689	0.8389
BETA	21.31420	3.523528	6.049109	0.0000
DI	-0.630791	0.191992	-3.285501	0.0034
LEV	18.75409	2.593060	7.232414	0.0000
R-squared	0.852900	Mean		5.537372
Adjusted R-squared	0.819468	S.D.		2.078033
S.E. of regression	0.882937	Akaike info criterion		2.776284
Sum squared resid	17.15072	Schwarz criterion		3.061756
Log likelihood	-32.86797	F-statistic		25.51157
Durbin-Watson stat	2.262634	Prob(F-statistic)		0.000000

The table shows a summary of findings regarding relationship between cost of equity and company attributes, which is proxied by BM (Book Value to Market Value), LMVAL (the natural log of market value), BETA (market beta), LEV (financial leverage) and DISCL (total disclosure score) between 2008 and 2014 for the 37 sample companies from the KASE.

According to the results of the research, independent variables are statistically significant at the 1% level except BM variable. The model is statistically significant, with R-square equal to 85%. Regression coefficient for firm size is negative and significant at the one percent level. The conclusion is that, large firms tend to have lower cost of equity. This finding lends support to Hypothesis 3. Looking next at the variables, book to market value of equity (BM) is not statistically significant. The coefficient for measuring company's systematic risk (BETA) is positive and statistically significant. On the other hand, the coefficient for transparency and disclosure is negative and statistically significant that justifies the hypothesis about inverse relationship between cost of equity and disclosure. In other words, the higher level of disclosure decreases the cost of equity of the firm. The coefficient for financial risk (LEV) of the firm is positive and statistically significant.

**Table 4:** Regression Analysis, Disclosure Score is Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	48.05709	7.142556	6.728277	0.0000
COE	-0.521815	0.158824	-3.285501	0.0034
LNMC	-3.370215	0.828180	-4.069421	0.0005
BTOMV	-1.161652	9.481905	-0.122513	0.9036
BETA	9.109799	4.855974	1.875998	0.0740
LEV	10.29396	3.737759	2.754046	0.0116
R-squared	0.536525	Mean		28.86959
Adjusted R-squared	0.431190	S.D.		1.064784
S.E. of regression	0.803055	Akaike info criterion		2.586622
Sum squared resid	14.18774	Schwarz criterion		2.872094
Loglikelihood	-30.21271	F-statistic		5.093503
Durbin-Watson stat	2.445554	Prob(F-statistic)		0.002985

The table shows a summary of findings regarding relationship between disclosure score and company attributes, which is proxied by BM (Book Value to Market Value), LMVAL (the natural log of market value), BETA (market beta), LEV (financial leverage) and COE (cost of equity) between 2008 and 2014 for the 37 sample companies from the KASE.

The results show that independent variables are statistically significant at 1% and 10% level except BM variable (see Table 4). The explanatory power of the model (R-square value) equals to 53.6%. The regression coefficient for the firm size is negative and statistically significant that does not coincide to the previous study results that the degree of corporate disclosure and transparency is an increasing function of firm size. The negative sign on the coefficient suggests that size has not a direct influence on level of disclosure in the companies in Kazakhstan. Although most previous studies support a positive relationship, there is an unclear theoretical basis for such a relationship. The direction of association may be either positive or negative. On the positive, since large

companies are spread over wide geographical areas and deal with multiple products and have multidivisional structure, they are likely to have extensive information system that allows them to keep a tab on all financial and non-financial information for operational, strategic and tactical purposes. As a result, the incremental costs of supplying information to external users will be much more cost effective than for smaller companies. This will make them disclose more information than their smaller counterparts. Watts and Zimmerman (1986) argue that larger companies intentionally reveal more information in order to gain or improve the confidence of stakeholders and to reduce political costs. Generally, large firms disclose more information than smaller ones (Meek et al., 1995).

Some previous studies found a negative association between size and the level of corporate disclosure (Aljifri, 2008; Aljifri & Hussainey, 2007; Kou & Hussain, 2007; Mak, 1996; Gray et al., 1995a; Roberts, 1992; Davey, 1982; Ng, 1985; Stanga, 1976). The variable is negative and therefore, hypothesis 2 is not supported. This implies that larger companies do not disclose significantly more voluntary information than do smaller ones. In addition, large firms are visible and susceptible to political attacks, in the form of pressure for the exercise of social responsibility, greater regulation such as price control and higher corporate taxes. Firms may react to this political action by avoiding attention which disclosure of some significant facts could have brought to them. Therefore, large firms will go back to reduced disclosure of information in their annual reports to gain freedom from above pressures (Wallace, Naser & Mora, 1994; Wallace & Naser, 1995).

The coefficient for BETA is positive and statistically significant, showing that the degree of corporate disclosure and transparency are positively related to a measure of systematic risk of the firm. The coefficient for COE is negative and statistically significant, thus supporting hypothesis 1. The coefficient for measure of debt level (LEV) is positive and significant, showing that firm with a greater amount of debt tend to have high degrees of corporate disclosure and transparency, thus supporting hypothesis 4. Prior research investigated if there existed any association between leverage and level of disclosure (Meek et al., 1995; Chow & Wong-Boren, 1987; Iatridis, 2008). According to Iatridis (2008), firms that provide extensive accounting disclosures tend to use more debt than equity to finance their operations. It became evident that firms are inclined to disclose information about sensitive accounting issues, such as gearing and risk profile in order to reassure investors and lenders that abide with the disclosure practices as enumerated by the accounting regulation. Provision of accounting disclosures reduces overall level of risk and allows for gaining access to more funds in debt market.



## 7. Contribution

The significance of corporate disclosure practices has been of growing interest both in theory and in practice. Today's informational transparency of the company is an integral part of good corporate governance that reduces the information asymmetry between agents and principals. Therefore, it is interesting to measure the quality and quantity of transparency in Kazakh companies through voluntary and mandatory disclosure of information on the corporate website and corporate reports. The relevance of this approach is evidenced by the presence of a large number of empirical studies on the issues of disclosure and transparency effects on the cost of equity capital. Most research on disclosure quality and cost of equity capital relations has been conducted in developed countries whereas empirical studies from Kazakhstan are very scarce. This research is the first to perform a comprehensive investigation of the relation between disclosure and cost of capital for firms immersed in poor governance and institutional regimes.

The present research tested the claim that enhancing information disclosed in corporate annual reports would benefit companies with a reduction in their cost of equity capital. Thus, this study adds to the existing research on the benefits of corporate disclosure. This fills a gap in the existing literature by empirically testing the impact of disclosure on the company's cost of equity capital. Our study also contributes to recent research which investigates the determinants of the actual properties of accounting reports (Ball, Kothari & Robin, 2000; Ball, Robin & Wu, 2003; Ball & Shivakumar, 2005) which suggests that financial reporting practices depend on managers' incentives to provide informative numbers and not on standards and regulations. This literature, however, is silent about the effect of firm-level actions designed to improve the quality of financial reports. We show that financial reporting practices of firms with incentives to produce high quality reports reduce significantly their cost of equity capital. The study contributes to the existing research by justifying the choice of theoretical and methodological approaches, construction of the disclosure index and the selection of factors for the models based on the specifics of Kazakhstan.

Study of the relationship between corporate information disclosure and cost of equity, on the one hand, is a very relevant issue and there has been significant interest in the foreign researchers that is confirmed by the existence of a sufficiently large number of empirical studies in this area. On the other hand, for the Kazakh market, the topic of information transparency is not disclosed. In addition, domestic companies as a whole are characterized by a relatively high degree of opacity. For this reason, this work

is based, first and foremost, on the application of foreign experience. However, when constructing a disclosure index, as well as selection factors for models, the authors have sought to take into account the Kazakhstan specificity.

We should be cautious regarding the quality of information disclosed by the companies because the information provided in financial reports may not be of the expected quality. For this reason, it is the job of auditors to detect any discrepancies, to ensure the quality and reliability of the disclosed information. Small firms provide less information than large ones, which supply more information about their independence standards, audit committees, management supervision systems and whistle-blowing procedures. However, compared to small firms, large ones do not appear to give superior information about their environment. These results obviously raise questions that lie at the heart of most financial scandals as, in the end, firms' size matters less than respecting good governance, the latter being probably the main criterion to improve financial stability. As we have seen above, one of the main objectives of the disclosure of financial statements is to inform internal and external users on the economic and financial situation of an organization. However, famous fraud scandals (Enron, WorldCom, Global Crossing, Xerox, Adelphia, Global Crossing, Parmalat, Lucent, Tyco etc.) have eroded public confidence in financial reporting. Large and successful companies may try to evade and disguise the real conditions. In such cases, auditors should be careful about the quality of information that can be misleading.

Financial disclosures sometimes are not really reliable and trustable to use for prospective measurements. Rezaee (2005) explained that false statements have generated losses of more than \$500 billion to investors in recent years, and that this has resulted in a loss of credibility in the financial statements. Hence, the global benefits of disclosure for avoiding financial scandals seem at least doubtful. However, audits are usually undertaken to avoid problems related to the credibility of financial statements, and laws, regulations and rules have tried to enhance the quality of disclosure. Improving disclosures in the financial statements means that existing data on corporations become more reliable and investors can rely on them in assessing the prospects of the corporation.

## 8. Conclusion

In this work the main empirical research was done on corporate disclosure of information and exploring the relationship between company transparency and its impact on company value. In most research, methodology for building the disclosure index was based on the analysis of

corporate websites. The firm characteristic values affecting the level of information disclosed and cost of equity are used to build a regression model to test the relationship between information transparency and cost of capital. In this sense, the results of this study are compatible with the results of the foreign empirical studies. The regression results show that a higher level of disclosure is associated with a lower cost of equity capital, after controlling factors such as beta and firm size. Theoretical research supports this claim by emphasizing the effect of greater disclosure on stock market liquidity and estimation risk.

Under the lights of this research, it is concluded that there is a significant relationship between corporate transparency and cost of equity. The findings of the study are in conformance with prior studies examining relationship between corporate transparency and company value. According to results of this study, firm characteristics

proxied by BETA, LMVAL and LEV are statically significant at the 10% level. However, BM value shows no significant relationship between corporate transparency and firm characteristic.

The findings of the study indicate that significant positive relationships between dependent variable (COE) and independent variables (BETA and LEV) exist and a significant negative relationship between COE and DISCL and LMVAL exists. Evidence on the issue of disclosure outside the annual report and cost of equity capital is still limited and requires further investigation, and is, therefore, a potential area for future research. Overall, the findings of the present research supported the view that companies disclose substantial but rather incomplete information in annual reports.

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Print ISSN: 2288-4637 / Online ISSN 2288-4645  
doi:10.13106/jafeb.2017.vol4.no3.19

# Determinants of Commercial Banks' Efficiency in Bangladesh: Does Crisis Matter?

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Received: April 5, 2017 Revised: May 26, 2017 Accepted: August 5, 2017

## Abstract

Banks play a crucial role in bringing stability and economic development through their expected contribution in proper financial resource mobilisation across the economy. Despite the importance, there is little focus in recent literature which provided the empirical evidence how the global financial crisis affect the bank efficiency in Bangladesh. Thus, this paper aims to examine the effect of the global financial crisis and other factors on the efficiency of Bangladesh commercial banks. By employing the Data Envelopment Analysis (DEA) method, we computed the technical efficiency of individual banks operating in the Bangladesh banking sector during 2000 to 2013. The empirical findings indicate that the Bangladesh banking sector has exhibited the highest efficiency level during 2001, while efficiency seems to be at the lowest level during 2010. The study finds that crisis along with bank size, capital adequacy ratio, return on average equity and real interest rate have a significant effect on bank efficiency in Bangladesh. In order to keep the sound financial development of Bangladesh, banks operating in the Bangladesh banking sector have to consider all the potential technologies which could improve their profit efficiency levels, since the main motive of banks is to maximise shareholders' value or wealth through profit maximisation.

**Keywords:** Bank Efficiency, Commercial Banks, Financial Crisis, Post-Crisis, Bangladesh.

**JEL Classification Code:** G01, G21, G32.

## 1. Introduction

Banks play a crucial role in bringing stability and development of the economy through their expected contribution in the proper mobilisation of financial resources across the economy (Husain & Abdullah, 2008). Efficient intermediation of bank increases economic growth and

financial stability, but insolvency leads to economic crisis. Further, the efficiency of banks not only contributes to the productivity in the economy but also makes the economy more enduring to negative and external shocks (Athanasoglou, Delis & Staikouras 2008a). Therefore, efficiency is vital for the growth and stability of the whole economy. Over the last few decades, most of the emerging countries have liberalised their monetary policies as well as encouraging foreign banks' entry into the local banking market, thus, influencing the competition intensity (Mirzaei, Moore & Liu, 2013) which might result in the reduction in bank profits as banks might not be able to earn economic rent by utilising their monopolistic power and hence, affect the banks' financial performance and efficiency levels.

Since the early 1970s, the banking industry in Bangladesh has become an important tool for the financial system. The government of Bangladesh set few requirements for all financial institutions including commercial banks to fulfil some economic objectives. In Bangladesh, four types of banks are operating namely, government-owned specialised banks or state-owned development financial institutions

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(DFIs), nationalised commercial banks or state-owned commercial banks (SCBs), domestic private commercial banks (PCBs), and foreign commercial banks (FCBs). Operating the banks in an efficient way is the most important issue in the Bangladesh banking sector after the formation of the National Commission on Money, Banking and Credit in 1986 (Sufian & Kamarudin, 2013). In order to strengthen the regulation and supervision of the Bangladesh banking sector, the World Bank assisted the Central Bank of Bangladesh (CBB) in 1991 (Sufian & Kamarudin, 2013). The efficiency of the banking area is essential to preserve the soundness of the banking system.

The financial crisis in both advanced and transition economies and associated fiscal cost of crisis resolution (Honohan & Klingebiel, 2003) has cultivated a new wave of interest among the researchers to re-examine bank efficiency. Bank efficiency has been the main focus of a considerable amount of literature, with most of the empirical study related to the United States (US), as well as western and developed countries (Athanasoglou et al., 2008a; Athanasoglou, Brissimis & Delis, 2008b; Fries & Taci, 2005; Girardone, Molyneux & Gardener, 2004; Heffernan & Fu, 2010; Qin & Pastory, 2012). The literature on bank efficiency focusing on developing countries, however, is scarce. Some researchers such as Abd Karim (2001), Barry, Lepetita and Tarazia (2010), Chantapong (2005), Dacanay (2007), Ferrier (2001), Girardone et al. (2004), Guru, Staunton and Balashanmugam (2002), Manlagñit (2011), Parinduri and Riyanto (2014), Sufian (2010), Sufian and Habibullah (2010) and Vu and Nahm (2013) have made significant contribution in the banking literature focusing on ASEAN countries.

Most recently, Vu and Nahm (2013) recognised that among the foreign banks operating in Vietnam, those headquartered in Australia, Japan, the US and Europe outperform than those headquartered in Asia as well as the domestic banks. Ferrier (2001) also supported previous studies and found that among the ASEAN countries, Philippines banks suffer from the least cost efficiency. Later on, Dacanay (2007) examined the profit and cost efficiency of Philippines commercial banks during 1992 to 2004 and revealed that the cost inefficiency of the bank has increased as a result of the Asian financial crisis. Manlagñit (2011) supported Dacanay (2007) and added that assets quality and risk also affect the efficiency of Philippines banks. Parinduri and Riyanto (2014) however, identified that cost efficiency has increased in Indonesian banks after the 1997 Asian financial crisis. Girardone et al. (2004) found that post-crisis restructuring of the banking sector had a negative influence on bank performance and made local banks less efficient. The findings of Chantapong (2005) showed that profitability increased in the banks in ASEAN countries in

the post-crisis period due to lowering of credit exposure and the efficient management of expenses (Guru et al., 2002); and Malaysian banks showed higher efficiency than Thai banks (Sufian, 2010) during that period. The global financial crisis of 2007-2008 which started in the US economy also affected ASEAN countries and brought negative effects on the efficiency of Thailand banks (Sufian & Habibullah, 2010). In the case of Bangladesh, there were only a few studies focusing on bank efficiency (Bhuia, Baten, Kamil & Deb, 2012; Hoque & Rayhan, 2013; Sufian & Kamarudin, 2013). However, the studies only focus on the efficiency of the banks in Bangladesh but did not study the effects of any crisis or other determinants on the efficiency.

Numerous studies have been undertaken to focus on banking profitability especially internal and external determinants considering both cross country and a single country. The first group includes Athanasoglou et al. (2008a), Masood and Ashraf (2012) and Perera, Skully and Chaudhry (2013). The second group includes Husain and Abdullah (2008), Athanasoglou et al. (2008b), Heffernan and Fu (2010) and Qin and Pastory (2012). The second group mainly conducts their research based on developing economies. Different studies used different measures as profit proxy: such as Perera et al. (2013) considered return on average assets (ROAA), Athanasoglou et al. (2008b) and Husain and Abdullah (2008) considered return on assets (ROA); Qin and Pastory (2012) and Masood and Ashraf (2012) considered both ROA and return on equity (ROE), whereas, Heffernan and Fu (2010) conducted their study considering ROAA, ROAE, NIM and economic value was added as profit measure.

On the other hand, bank efficiency depends on different bank specific elements such as bank capitalization and profitability, macroeconomic elements such as gross domestic product (GDP) growth, inflation rate, real interest rate, and ownership effect (either private or government). Capitalization effects bank efficiency directly as it is really an issue of concern to have high capitalization or low capitalization. This is because low capitalization may lead the bank to expose default risk whereas high capitalization may result in higher cost and low profitability. Considering the issue, many studies have been conducted focusing on bank capitalization as an internal determinant of efficiency. Among others, Pancurova and Lyocsa (2013), Casu and Molyneux (2003), Mirzaei et al. (2013) and Barry et al. (2010) found that capitalization effects efficiency positively where Mohanty, Lin and Lin (2013) and Ab-Rahim, Md-Nor, Ramlee and Ubaidillah (2012) revealed that capitalization effects efficiency negatively. However, Fries and Taci (2005) argued that higher capitalization leads a bank to have low-cost inefficiency. Furthermore, bank efficiency is related to profitability indicating higher efficiency banks are more

profitable. Maudos (1998) and Casu and Molyneux (2003) found that bank profitability is positively related to efficiency. Samad (2008) concluded that ownership is not a statistically significant factor relating to bank efficiency. He found that domestic private banks outperform state-owned banks in terms of efficiency. However, Bonin, Hasan and Wachtel (2005) found that government-owned banks were not appreciably less efficient than domestic private banks.

The effect of the global financial crisis on the banks of Bangladesh is not focused enough on recent literature. Despite the importance, there is little focus in recent literature which provided the empirical evidence how the global financial crisis affect the bank efficiency in Bangladesh. Thus, this paper aims to examine the effect of the global financial crisis and other factors on the efficiency of Bangladesh commercial banks. This paper is expected to contribute to the banking literature by filling the gap in the impact of the global financial crisis, bank specific, macroeconomic and ownership on bank efficiency of Bangladesh commercial banks. The next section explains the research methodology, followed by the third section that discusses the analysis and findings and finally, the conclusion and policy recommendations are presented in the fourth section.

## 2. Methodology

### 2.1. Methods

In our study, we used the Data Envelopment Analysis (DEA) technique. The DEA is a mathematical programming approach to measure the efficiency relative to the assembled frontiers. The basic DEA is based on an idea of efficiency very similar to the microeconomic one. However, the DEA frontier is not produced by some unambiguous functional form, rather it is generated from the actual data for the assessed organisations. In general, the DEA frontier is formed of linear combination that links the set of observations in the data set under analysis that creates a convex Production Possibility Set (PPS). As a result, the DEA efficiency score for a particular Decision-Making Unit (DMU) is not defined by an absolute term rather it is defined relative to the other DMUs in the specific data set under consideration (Casu & Molyneux, 2003). In this study, we used variable returns to scale (VRS), first introduced by Banker, Charnes and Cooper (1984) to compute efficiency scores. The choice of VRS over a constant return to scale (CRS) is justified that all DMUs are not operating at an optimal scale due to imperfect competition and financial constraints (Barry et al., 2010). As a consequence, using of the CRS will result in measures of technical efficiency (TE) which are confounded by scale efficiencies (SE).

Just like Casu and Molyneux (2003), we used input-oriented (input minimization) approach to measure efficiency, since in the input-orientated models, the DEA method pursues to classify technical inefficiency as a relative decline in input usage as well as to quantify technical inefficiency as a proportional increase in output production. These two measures provide the same value under CRS, but different under VRS. It has both theoretical and practical implications, for example, in businesses where the importance is on cost-control, the choice would be an input orientation (Ferrier & Valdmanis, 1996).

Though there is no inclusive theory of the banking firm and no agreement on the explicit definition and measurement of banks' inputs and outputs, Berger and Humphrey (1997) denoted that the 'intermediation approach' may be more suitable for assessing entire financial institutions because of the inclusiveness of interest expenses, which often account for one-half to two-thirds of total costs. Besides, the 'intermediation approach' may be appropriate for assessing the significance of frontier efficiency to the profitability of financial institutions, since the minimization of total costs such as interest expenses, non-interest expenses and personnel expenses, not just production costs, is required to maximise profits. Following the previous studies (Barry et al., 2010; Casu & Molyneux, 2003; Molyneux, Altunbus & Gardener, 1996), the 'intermediation approach' is used in financial institutions as intermediaries between the supply and the demand of funds. The key significance of the intermediation approach is to consider deposits as inputs, and interest on deposits as an element of total costs. We, therefore, considered interest expenses, non-interest expenses, personnel expenses, and deposits as inputs whereas total loans, liquid assets and other earning assets as outputs. Finally, we used DEAP 2.1 software and the Two-Step approach, as proposed by Coelli, Rao & Battese (1998) to estimate efficiency score. The mathematical specification of DEA-VRS input-oriented model is as follows:

#### DEA VRS Input-Oriented Efficiency Estimation

Min  $\theta$

Such that:

$$\begin{aligned} \sum_{j=1}^n \varphi_j A_{ij} &\leq \theta A_{i0}; i = 1, 2, \dots, x \\ \sum_{j=1}^n \varphi_j B_{qj} &\leq B_{q0}; q = 1, 2, \dots, y \\ \sum_{j=1}^n \varphi_j &= 1 \\ \varphi_j &\geq 0; j = 1, 2, \dots, m \end{aligned} \quad (1)$$



Where  $\theta$  is the efficiency score,  $A_{ij}$  and  $B_{qj}$  are the amount of the  $i^{th}$  input consumed and the amount of the  $q^{th}$  output generated by the  $j^{th}$  bank, respectively. The index  $m$  refers to the number of bank observations,  $x$  equals the four inputs (interest expenses, non-interest expenses, personnel expenses, and deposits) and  $y$  refers to the three outputs (total loans, liquid assets and other earning assets) and  $\varphi$  is constant.

To further investigate the determinants of bank efficiency in Bangladesh, we use the efficiency measures derived from the DEA estimations as the dependent variable using STATA version 14, we then estimate the following Tobit regression model:

$$\theta_{it} = +\gamma_1 SIZE_{it} + \gamma_2 ROAE_{it} + \gamma_3 EQA_{it} + \gamma_4 GDPG_t + \gamma_5 INRST_t + \gamma_6 INF_t + \gamma_7 OWN_i + \varepsilon_{it} \quad (2)$$

$$\theta_{it} = +\gamma_1 SIZE_{it} + \gamma_2 ROAE_{it} + \gamma_3 EQA_{it} + \gamma_4 GDPG_t + \gamma_5 INRST_t + \gamma_6 INF_t + \gamma_7 OWN_i + \gamma_8 CRISIS_i + \gamma_9 PCRISIS_i + \varepsilon_{it} \quad (3)$$

Where,

$SIZE_{it}$  = log of total assets of bank  $i$  in year  $t$ ;

$ROAE_{it}$  = Return on Average Equity of bank  $i$  in year  $t$ ;

$EQA_{it}$  = Equity/Total Assets of bank  $i$  in year  $t$ ;

$GDPG_t$  = Gross domestic product (GDP) growth of Bangladesh in year  $t$ ;

$INRST_t$  = Real interest rate of Bangladesh in year  $t$ ;

$INF_t$  = Inflation rate (Consumer price index) of Bangladesh in year  $t$ ;

$OWN_i$  = Ownership Structure (1= if a bank is state owned commercial bank; 0= otherwise)

$CRISIS_i$  = The global financial crisis (1 = if the year is in the GFC period; 0= otherwise)

$PCRISIS_i$  = The post global financial crisis (1 = if the year is in the post GFC period; 0= otherwise)

The capital adequacy is estimated by equity over total assets (EQA) while the profitability ratio is defined as the Return on Average Equity (ROAE). Previous studies (Carbo, Gardener & Williams, 2003; Casu & Molyneux, 2003; Lozano-Vivas, Pastor & Pastor, 2002) found positive relationship between efficiency and return on equity as well as between efficiency and EQA which means more efficient banks earn more profit and higher EQA leads to higher efficiency level, because of low-risk propensity and low leverage that could result in low borrowing cost. The dummy variable  $OWN$  is introduced to detect whether there are efficiency differences between state-owned commercial banks and private owned commercial banks.

## 2.2. Data and Variables

In the present international setting, the need for comparable data from different countries imposes strong restrictions on the type of variables one is able to use, not least because of the various accounting criteria used in the five countries under investigation. To minimise possible bias arising from different accounting practices, broad variable definitions have been chosen as presented by Bureau Van Dijk- Fitch Solutions Bankscope. A sample of 31 commercial banks of Bangladesh was extracted from Bankscope database. Table 1 shows the descriptive statistics of the variables used in our analysis. The data were also extracted from the nonconsolidated income statement and balance sheet data corresponding to the years 2000–2013. All data are reported in USD (million). In order to maintain homogeneity, only state commercial banks (SCB) and private commercial banks (PCB) are included in the analysis for ownership. Further, we have collected the macroeconomic variables data from the World Bank database. We have considered 2007-2008 as crisis period and 2009-2013 as a post-crisis period. For banks with missing information, we have looked at the individual bank's websites to determine the appropriate classification. Finally, we calculated the efficiency score year by year and we got different observations in different years.

**Table 1.** Descriptive statistics

Variables	Observations	Mean	Std. Dev.	Min	Max
VRS	296	0.989	0.025	0.84	1.00
TA	296	1462.69	1571.93	35.31	10020.66
ROAE (%)	290	15.69	17.12	-88.43	54.22
EQA (%)	296	6.97	4.65	-12.94	32.15
GDPG (%)	296	5.79	0.81	3.83	7.06
INRST (%)	296	7.79	2.50	4.47	12.18
INFR (%)	296	6.83	2.41	2.01	10.7

VRS, TA, ROAE, EQA, GDPG, INRST, INFR refer to variable return scale, total assets, return on average equity, total equity / total assets, gross domestic product growth rate, real interest rate, inflation rate

In Table 1, the mean of total assets of commercial bank of Bangladesh is \$1,462.69 million, the average efficiency score (variable return scale) is 0.989, the mean of ROAE and EQA are 15.69% and 6.97% respectively. The bank assets are more volatile across the banks in Bangladesh. The average GDP growth, real interest rate, and inflation rate are 5.79%, 7.79%, and 6.83% respectively.

### 3. Results

#### 3.1 Bank Efficiency

Using DEA, we generate the Bangladesh commercial banks common efficiency frontier and then compare each bank with this common frontier. A bank falling closer to the frontier is supposed to be more efficient than the one falling farther away from it. Table 2 shows VRS based input oriented mean scores for each year alongside CRS and SE, for comparison. Although slightly different in magnitude, the VRS efficiency scores correspond with CRS and SE.

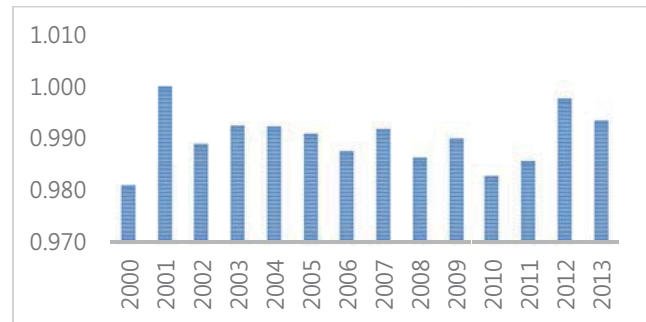
**Table 2.** Year-wise efficiency mean score and number of efficient banks

YEAR	VRS	CRS	SE	Efficient Banks	Total Banks	Efficient (%)
2000	0.981	0.967	0.985	12	16	75.00
2001	1.000	0.987	0.987	16	16	100.00
2002	0.989	0.977	0.988	13	16	81.25
2003	0.993	0.982	0.989	14	16	87.50
2004	0.992	0.976	0.983	15	17	88.24
2005	0.991	0.974	0.983	14	17	82.35
2006	0.988	0.981	0.993	15	18	83.33
2007	0.992	0.984	0.992	16	18	88.89
2008	0.986	0.983	0.997	14	20	70.00
2009	0.990	0.987	0.997	19	26	73.08
2010	0.983	0.978	0.995	18	31	58.06
2011	0.986	0.982	0.996	18	31	58.06
2012	0.998	0.992	0.995	22	26	84.62
2013	0.994	0.989	0.996	20	28	71.43

VRS, CRS, and SE refer to Variable Return Scale, Constant Return Scale, and Scale Efficiency respectively.

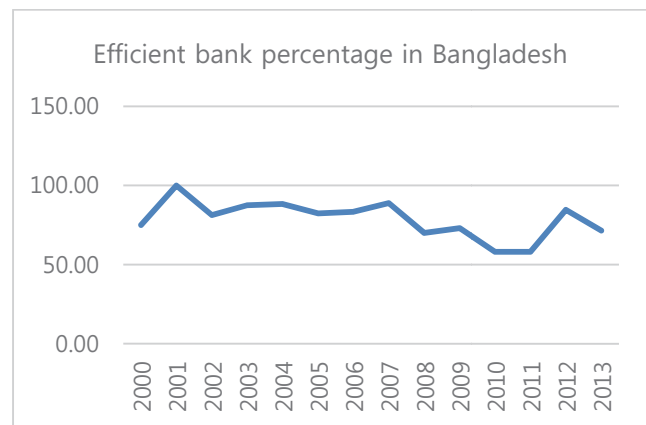
Generally, during the period of study, we noted the mean efficiency scores are relatively more volatile in commercial banks of Bangladesh. We find the highest mean efficiency in 2001 with the smallest variability, under output-oriented VRS versions. This indicates 2001 as the best year in the sample period in terms of banking sector efficiency in Bangladesh. If we analyse the crisis period of the study in Figure 1, we find that overall efficiency of the banks in 2008 is lower than in 2007 and 2009. However, the efficiency level declined sharply in 2010 which fall under the post-crisis effect which is similar to the findings of Sufian (2010) who did an analysis of the 1997 Asian financial crisis. The results suggested that banking efficiency was severely affected by the crisis that resulted in lower efficiency after the crisis. Though there was an upturn in efficiency in 2012, the overall efficiency is going to decline from 2013. This can be explained by the fact that the political instability of

Bangladesh could be one of the main reasons for the decline in the efficiency of the banks.



**Figure 1.** Trend of mean efficiency score (VRS) from the year 2000 – 2013

In terms of individual bank performance based on efficiency, we can see the downward trend of the contribution of the percentage of the banks to the efficiency frontier in Figure 2. The lowest contribution to the frontier was in 2010 and 2011 which was after the crisis. After that in 2012, there was a slight upturn of the contribution. However, due to the political instability, the trend again, declines. The year-wise and bank-wise efficiency score can be seen in Appendix.



**Figure 2.** The contribution of the banks in efficiency frontier from the year 2000-2013

#### 3.2 Determinants of Bank Efficiency in Bangladesh Banking Industry

We have also reported our Tobit regression findings on the equation we estimated in Table 3. We ran the equation (2 & 3) to see the crisis and post-crisis effect on determinants of bank efficiency in Bangladesh.

**Table 3.** Determinants of Bank Efficiency in Bangladesh.

Variables	Expected Sign	Model 1	Model 2	Model 3
Size	+	0.023** (0.011)	0.022** (0.011)	0.024** (0.011)
Return on average equity	+/-	-0.002*** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Capital adequacy	+	0.008*** (0.003)	0.008*** (0.003)	0.008*** (0.003)
GDP growth	+	0.008 (0.011)	0.007 (0.011)	0.002 (0.013)
Real int. rate	+	0.016*** (0.006)	0.015** (0.006)	0.007 (0.011)
Inflation rate	-	-0.004 (0.004)	-0.005 (0.005)	-0.007 (0.005)
Ownership	+	0.013 (0.018)	0.014 (0.018)	0.015 (0.018)
Crisis			0.011 (0.023)	
Post-crisis				-0.058*** (0.020)
Number of obs.		290	290	290
LR $\chi^2$		32.96	33.17	33.96
Prob > $\chi^2$		0.0000	0.0000	0.0000
Pseudo $R^2$		0.7197	0.7243	0.7414

\*\*\*, \*\*, \* represent 1%, 5% and 10% significance level respectively, standard errors are in the parentheses.

In our analysis, we use three models where the first model represents the determinants of bank efficiency without any effect and model 2 and model 3 show the effect of crisis and post-crisis respectively. The two bank specific variables which are bank size and capital adequacy representing capitalization return positive coefficient and significant in all models. These results imply that bank size and the capital ratio has a positive impact on bank's technical efficiency in Bangladesh. Our results are in agreement with other studies (Carbo et al., 2003; Lozano-Vivas et al., 2002; Mester, 1996). The results explain that large banks can handle their resources efficiently at least technically and can maintain positive capital adequacy ratio, even during crisis and post-crisis period. Unfortunately, we find a negative relation of the ROAE variables representing profitability with efficiency during and after the immediate post-crisis years which imply that even the technically efficient and well-capitalised bank could have lower profitability.

Our next variables of interest are the macroeconomic variables. Referring to Table 3, the results show that GDP growth rate and inflation rate are not significant determinants of bank efficiency in Bangladesh though we find the expected sign. However, the real interest rate has

significant positive impact on bank efficiency though it is insignificant in the post-crisis period. The results show that bank efficiency does not rely on macroeconomic variables except real interest rate in Bangladesh, rather they mostly rely on bank specific variables. Further, to account for ownership, we incorporated the ownership dummy variable to distinguish between state-owned commercial banks and private owned commercial banks. Regardless of its asset size, concentration and other considerations, our binary dummy variable give equal weight to the two banks regardless of their shareholding, which may significantly differ. Our defined ownership dummy was not significant throughout the sample period, denoting that banks owned by the state are as efficient as private owned. These results may be aligned with Chantapong (2005), who found that efficiency gap between the state and private banks shrinks significantly during and after the crisis period. Finally, we use the dummy for crisis and post-crisis in model 2 and model 3 respectively. We find that during the crisis, the efficiency of the banks in Bangladesh was not affected. However, immediately after the crisis, bank suffers efficiency problem. This can be explained by the fact that crisis started in the United States but was later spread all over the world and Bangladesh was no exception, thus experiencing efficiency problem after the crisis.

## 4. Conclusions

To date, studies on bank efficiency are numerous. However, most of these studies have concentrated on the banking sectors of the western and developed countries. On the other hand, empirical evidence on the developing countries is relatively scarce. The present study attempts to fill in this gap by providing new empirical evidence on the bank efficiency in Bangladesh. By employing the Data Envelopment Analysis (DEA) method, we compute the technical efficiency of individual banks operating in the Bangladesh banking sector during the years of 2000 to 2013. The period covered in this study captures the recent global financial crisis in 2007 and 2008. The empirical findings indicate that the Bangladesh banking sector has exhibited the highest efficiency level during 2001, while efficiency seems to be at the lowest level during 2010. This study finds that bank size, capital adequacy ratio, return on average equity and real interest rate have a significant effect on bank efficiency in Bangladesh.

The empirical findings from this study present considerable policy relevance. Firstly, the empirical findings from this study clearly suggest that the decline in the efficiency of Bangladesh banks were mainly due to scale and the crisis effect. The results imply that banks operating

in the Bangladesh banking sector are either too small to benefit from the economies of scale or too large to be scale efficient. The results also suggest that during the crisis, the efficiency of the banks in Bangladesh was not affected. However, immediately after the crisis, the bank suffered efficiency problem. Thus, from the policy-making perspective, the results imply that the relatively smaller banks could raise their efficiency levels by expanding, while the larger banks would need to scale down their operations to be scale efficient. The results could also provide better information and guidance to bank managers, as they need to have a clear understanding of the impact of efficiency on the performance of their banks. Thus, banks operating in the Bangladesh banking sector have to consider all the potential technologies which could improve their profit efficiency levels since the main motive of banks is to maximise shareholders' value or wealth through profit maximisation.

Nevertheless, the study has also provided insights to policymakers with regard to attaining optimal utilisation of

capacities, improvement in managerial expertise, efficient allocation of scarce resources, and the most productive scale of operation of commercial banks operating in the Bangladesh banking sector. This may also facilitate directions for sustainable competitiveness of the Bangladesh banking sector operations in the future. Due to its limitations, this paper could be extended in a variety of ways. Firstly, future research could include more variables such as taxation and regulation indicators, exchange rates as well as indicators of the quality of the offered services. Secondly, in terms of methodology, the non-parametric Malmquist Productivity Index (MPI) method could be employed to investigate changes in productivity over time as a result of technical change or technological progress or regress could yet be another extension to the present paper. Finally, future research into the efficiency of the Bangladesh banking sector could also consider the production function along with the intermediation function.

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Print ISSN: 2288-4637 / Online ISSN 2288-4645  
doi:10.13106/jafeb.2017.vol4.no3.27

# The Role of Investment Attraction in Vietnamese Industrial Parks and Economic Zones in the Process of International Economic Integration\*

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Received: April 16, 2017 Revised: May 27, 2017 Accepted: August 5, 2017

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## Abstract

This study aims to assess the attraction of foreign direct investment in Vietnamese economic zones (including industrial zones and economic zones). The main research method used are synthesis and comparison analysis based on the data collected from the surveyed group comprising of enterprises operating in the economic zones in the Middle (Chu Lai, Nhon Hoi, Dung Quat) and the Southern (the largest island: Phu Quoc). After conducting surveys, research results show that there is a difference between the assessment and the level to meet the requirements of investors with business environment, expressed through the following criteria: (1) the infrastructure; (2) quality of public services; (3) preferential policies; (4) labor; (5) market; and (6) social services. Based on the assessment of the identified criteria, this paper had suggested six number of recommendations to promote the role of attracting foreign direct investment capital into the economic zones in Vietnam: (1) implementing the "one-stop-shop" policy; (2) continuing to improve the infrastructure of economic zones; (3) prevent and ensure the security of economic zones; (4) implementing vocational training activities to improve quality of human resources; (5) development of supporting industries; (6) raising the quality of capital invested in the economic zone

**Keywords:** Economic Zones, Direct Investment, International Economic Integration, Vietnam.

**JEL Classification Code:** O16, O53, P25.

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## 1. Introduction

Introduction of the economic zone model really has a role and an important meaning for countries, especially developing countries, because of their roles and their spread to the regions and territories. Nowadays, in the process of extensive economic integration, the role of economic zones is increasingly needed to be promoted as it

contributes to the positioning of the national economy. The birth of economic zone has been around for a long time prior to the 18th century, in the form of free ports or commercial areas. However, it only became popular in late 20th century with the success of the Shenzhen Economic Zone model in China. Since this success, a series of economic zones have been opened in different countries around the world.

In Vietnam, the economic zone model has also been formed and developed quite early with the opening of Vung Tau - Con Dao special economic zone. So far, the model of economic zone in Vietnam has developed in various forms and diversity, such as: industrial zones, export processing zones, border economic zones, high-tech zone, special economic zone and coastal economic zones. These economic zones have changed the local economic aspects and are expressed through many important criteria such as attracting foreign direct investments (FDI), creating jobs, contributing to the local budgets, contributing to promoting export activities, bringing foreign currency to the economy, etc. Therefore, the economic zones are used with many different goals, one of the most important goals is to create

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\* This research is funded by Vietnam National University - Ho Chi Minh City (VNU-HCM) under grant number B2015-34-02

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a favorable environment in order to attract investment capital for production development. If this goal is guaranteed, it will resolve many other problems and objectives in the development process.

With geographical features as well as support for special policies to attract investment, foreign direct investment into Vietnamese economic zones is growing in recent period. This showed the determination of the government to create favorable conditions for enterprises to invest in production. However, in practice, there are still many limitations in the process of attracting investment capital for production development. This paper is based on the survey of enterprises' assessment about factors affecting investments in economic zones conducted in 2016. From the findings of the survey, a number of proposals and recommendations are included in this paper to promote the role of attracting foreign direct investment capital into the economic zone in Vietnam. In addition to the introduction and conclusion, the structure of this paper also includes the following: (1) the theoretical basis; (2) assessment of the attraction of foreign direct investment capital in industrial parks and economic zones in Vietnam; and (3) propose a number of solutions to improve the model of economic zone in Vietnam.

## 2. Theoretical Basis

### 2.1. Economic Zone

The free zone (FZ), free economic zone (FEZ) and special economic zones (SEZ) are the product of increased international and regional economic relations. Economic zones are usually established in a certain political and geographical territory in countries or in cross-border areas between nations. It is because the inner contents are externally manifested in various forms. As such, there is no uniformity for the concept of economic zone. But the one thing in common is that the concept of economic zone refers to a specific economic space that has a more open business environment with general rules that applied at the national economy level.

The core concept of FEZ is based on the basic principles and standards for the site which was specified by the World Customs Organization (WCO) through the Specific Annex D, Chapter 2 of the International Convention on the Harmonization and Simplification of Customs (1973) which has specifically issued guidelines, standards and recommendations for the handling of imports and exports goods from FEZs that include geographical restrictions. Accordingly, activities conducted in the free zone are not subjected to customs regulations on import and export taxes.

Thus, the category of free economic zone consists of geographical features (areas with specific territories). The procedures are simplified and reduced but based on the laws of that State, which includes import tax preferences, intermediate goods, materials and even in many cases include both equipment and capital. According to this understanding, the International Convention on the Harmonization and Simplification of Customs (1973) refers to economic zone as part of the territory of a contracting party where any good introduced are generally regarded, insofar as import duties and taxes are concerned, as being outside the Customs territory... and not subject to the usual Customs control.

In addition to this concept, different scholars and researchers have also given many definitions based on different approaches. Grubel (1984) introduced the FEZ concept approaching from a basic rent where free economic zone is a *defined geographic area where economic activities do not have to apply regulatory rules and government taxes as applied to the entire national economy*. The Foreign Investment Advisory Service (FIAS) (2008, p.2) gave a definition based on geo-economic perspective and the facilities that it provides whereby SEZs are generally defined as geographically delimited areas and is managed by a single agency, provides incentives for businesses having facilities in the area. Through many different stages, the concept of economic zone has changed a lot, but basically the economic zone still has four basic features (FIAS, 2008) as follows:

- Individual geographic location, secured separately from other areas through special fences or boundaries;
- Centralized and single management (implemented by the management board);
- Ensure benefits based on basic characteristics in the economic zone; and
- There is a separate customs area, tax exemption (or tax reduction) and quick procedures compared to outside areas

Thus, the concept of economic zones has been approached in many different directions, based on the objectives that the government determines when establishing these economic zones. Accordingly, the authors have synthesized this point of views and give a general concept about the model of economic zones as follows:

"Economic zone is a concept that refers to an area with appropriate geographic location, is established under the government's objectives (sometimes due to the geographical advantages, not from subjective

intentions) to create an area with more favorable conditions than the general conditions and promote economic development.”

## 2.2. The Role of Attracting Investment Capital in the Economic Zone

EZ can be considered as a trend for the development of nation, especially for developing countries because of its superiority and great role in the development of nations. FIAS (2008) has divided these benefits into two categories.

Firstly, the static benefits include: (1) job creation and income generation; (2) export growth and diversification of exports; (3) earning foreign exchange; (4) attracting foreign direct investment; and (5) create revenue for the government.

Secondly, dynamic benefits are difficult to measure, including: (1) indirect jobs creation; (2) improving the quality of labor; (3) solving the problem of female labor; (4) technology transfer; (5) creating an environment for testing the institutions of modern governance; and (6) role of regional economic development.

In addition, the scientists studying about economic sector also pointed out the roles of the economic zone in different approaches. Based on the theory of open economic zone, Vo (2010) pointed out seven major roles of the economic zone as follows: (1) create a national competitive advantage; (2) create new growth pole; (3) economic zones help to position the national economy in the global value chain, expressed in the contents where economic zones help attract foreign direct investment to position nation on the global economy; (4) economic zones are the gateway to absorb, create enterprise, global knowledge and technology; (5) economic zones serve as a tool for institutional innovation and create breakthrough development which includes the role of cities in the relationship between urbanization and economic growth; (6) the model of the economic zone is a test environment for modern state governance; and (7) the development of economic zone is the formation of a modern economic development within the national economy.

Meanwhile, according to Farole and Akinci (2011), economic zones are usually established to achieve the following four main goals: (1) to attract foreign investment; (2) to address large-scale unemployment; (3) to support a wider economic reform strategy; and (4) are used as a laboratory model to apply new approaches and policies.

In summary, the economic zone with policy incentives, natural location, etc. could achieve the main economic objectives of attracting investment capital, promoting resources to serve the local economy, create diffusion and

promote regional or national economy development. In addition, the economic zone is also used for political purposes as a place to test modern institutions, as well as a pilot test before issuing broader policy.

## 2.3. Factors Affecting Local Investment Attraction

Foreign direct investment (FDI) is the form of investment that the owners of capital brings their resources to another country for investment, in which capital owners are directly involved in the investment process and are responsible for investment efficiency (Tu & Pham, 2013). Capital is increasingly important for recipient countries, especially in developing countries. It solves the problem of low capital accumulation and contribute to improve the level of technology through the transfer activities from developed countries. In addition, foreign direct investment will develop domestic investment activities, enhancing the dynamism and competitiveness of domestic production and exploit the potential of the country thereby making a strong impact on economic restructuring involving sector structure, technological structure, products and labor. The territorial structure will be better suited to the needs of economic and social development of the country, and consistent with the trend of times. Besides such positive things, foreign direct investment also has many limitations such as, (1) the countries receiving investment are limited in management experiences, leading to foreign companies taking advantage of these restrictions to conduct fraudulent activities that negatively affect the environment, evade taxes etc. in order to increase profits for their companies; (2) the technology transfer process for the recipient countries is limited whereby the transferring of old, obsolete or outdated technologies might bring negative impact to the environment; and (3) taking advantage of investment to achieve political objectives of the investment-receiving countries such as disturbance of order, security and society.

However, it can be said that for today's investment capital, the process of integration into the economy has become an indispensable objective whereby no country is excluded from this activity (to invest or receive investment). In order to receive this investment, the receiving countries must meet the requirements as well as create favorable conditions for businesses and large corporations. According to Tu and Pham (2013), factors influencing international investment from the recipient countries include, (1) the political situation; (2) the legal environment; (3) the geographical location and natural conditions; (4) level of economic development; and (5) cultural and social development characteristics.



As mentioned above, the economic zone is a region with incentives from policies and institutions to create a favorable environment to attract investment, especially foreign direct investment that aims to create motivation and contributes to promoting the local and regional economic development. Therefore, it can be said that this is the main gateway to attract foreign direct investment capital into developing countries. However, in order to attract capital, the economic zones must meet the needs of enterprises. It means creating a favorable investment environment for investors to ensure the production process. According to the approach from the local marketing theory, the investment environment is a collection of local characteristics that are shaping the opportunities and motivating enterprises to invest effectively, creating jobs and expanding production. The combination of these particular elements consist of two main components which is local policy (soft infrastructure and other factors related to market size) and geographic advantages (hard infrastructure) (Nguyen, 2007).

Some empirical studies also showed that factors influencing foreign direct activity include, (1) market size; (2) the quality of human resources; (3) cost advantage; (4) infrastructure; (5) the formation of industry clusters; (6) the management of local government; (7) investment incentive policy; (8) geographic location and resources; and (9) investor satisfaction<sup>1</sup>.

### 3. Evaluation of Foreign Direct Investment Capital Attraction in Vietnam

#### 3.1. Overview of Industrial Parks and Economic Zones in Vietnam

In Vietnam, the establishment of economic zones are associated with the process of innovation and opening up of the economy. On May 28, 1979, the government reviewed the report on the establishment of the first special economic zone in Vung Tau - Con Dao. The report mentioned that the main task of Vung Tau - Con Dao Special Zone is to serve the search, exploration and exploitation of oil and gas on the southern continental shelf of Vietnam, which is

simultaneously combined with the task of ensuring security, defense, developing the fishing industry, tourism and other socio-economic requirements in the special zone<sup>2</sup>. Then, on May 30, 1979, Congress issued its own resolution on the establishment of Vung Tau - Con Dao special economic zone under the central government. According to this resolution, the special zone of Vung Tau - Con Dao includes Vung Tau town, Long Son Commune of Chau Thanh District, Dong Nai province and Con Dao district of Hau Giang province<sup>3</sup>. Through two stages of adjusting the form of administrative organization, on August 12, 1991, 9th Session VIII National Assembly issued a resolution on the adjustment of administrative boundaries of provinces and cities across the country. Since then, the government decided to establish Ba Ria - Vung Tau province from Vung Tau - Con Dao and three other districts which are Long Dat, Chau Thanh and Xuyen Moc in Dong Nai province. Thus, after 12 years of operation, the first special economic zone of Vietnam was dissolved. Although no clear reasons were given, everyone understood that this particular model has not produced the desired effects. The oil and gas industry in this period has developed largely due to natural advantages and international supports rather than the "special zone" model.

After this period, the model of economic zone in Vietnam was adjusted and developed in the other direction, starting with export processing zone model. Subsequently, the industrial park model was mentioned in Decree 192 / CP of December 28, 1994 on the promulgation of the Industrial Park regulation. The formation and development of industrial parks have brought new winds, created great motivation for local economic growth based on cheap human resources. Then, a series of industrial zones were formed in the localities throughout the country but concentrated mostly in key economic areas. However, this massive development has caused many unfortunate consequences, environmental issues and quality growth.

By 1999, to concretize the policy of utilizing its geographical strength and develop the marine economy, the government issued Decision No. 204/1999 / QĐ-TTg in October 18, 1999 on the establishment of the Steering Committee for the construction of Chu Lai open economic zone. Then, in 2003, Chu Lai Open Economic Zone was officially put into operation. Currently, Vietnam has 16

1 Synthetic from some research:

1. Le, T. L., & Nguyen T. T. (2013). Factors affecting the satisfaction of foreign direct investment enterprises: Case study in Da Nang. *Journal of Development and Integration*, 11(21), 73-78.
2. Nguyen D. T., & Nguyen T. M. T. (2009). Local attributes and business satisfaction. *Scientific research in business administration*, 75-145

2 Source: <http://vneconomy.vn/thoi-su/dac-khu-kinh-te-hanh-trinh-dang-viet-do-20120824014356769.htm> ngày truy cập 3/10/2016

3 Source: [https://vi.wikipedia.org/wiki/V%C5%A9ng\\_T%C3%A0u\\_-\\_C%C3%B4n\\_Dao\\_khu\\_v%E1%BA%A3o\\_\(%C4%91%E1%BA%7c\\_khu\)](https://vi.wikipedia.org/wiki/V%C5%A9ng_T%C3%A0u_-_C%C3%B4n_Dao_khu_v%E1%BA%A3o_(%C4%91%E1%BA%7c_khu)) ngày truy cập 4/10/2016

coastal economic zones and 316 industrial parks with a total area of 904.6 thousand hectares (land and water surface) <sup>1</sup>.

### 3.2. Evaluating the Situation of Attracting Investment into Industrial Parks and Economic Zones in Vietnam

Investment attraction of economic zones (generally including industrial parks and coastal economic zones) in Vietnam is becoming increasingly important as it is represented by the number of investment projects as well as the share of foreign investment in the whole economy. In 2010, the total investment in new economic zones was 260 with a total capital of US\$7,277 million, accounting for 37% of the total investment capital of the whole economy. By 2013, the role of attracting investment of economic zones is clearly expressed through direct foreign direct investment (FDI) amounting to US\$19,942 million, which accounts for up to 90% of the total FDI capital of the economy. In 2013, this proportion had decrease. However, it remains relatively high at 70% by 2015 (see Table 1).

**Table 1:** Number of investment projects and total foreign direct investment in Vietnam's economic zones in 2010-2015

Year	Total investment capital (million USD)	The number of new investment projects	Share of total domestic FDI (%)
2010	7277	260	37
2011	7220	325	46
2012	7780	381	60
2013	19942	409	90
2014	13700	752	72
2015	13.180	563	70

Source: Ministry of Planning and Investment, Report on the construction and development of industrial parks and economic zones in 2010-2015.

According to the report of the Ministry of Planning and Investment, accumulated until 7/2016, Vietnam's economic zones have attracted 7,649 foreign investment projects with a total registered capital of US\$145.1 billion. The capital has been made up to US\$84.7 billion (accounting for 58% of total registered capital) <sup>2</sup>. It can be said that this is one of the

many successes in the development of economic zones in Vietnam, contributing significantly to the objectives of solving employment issues and increasing production value for the economy. Achieving such impressive figure comes from the great effort of the government. The government has tried to create a favorable investment environment to attract foreign direct investment into Vietnam.

To better understand the assessment of FDI attraction in economic zones, the authors have directly investigated the enterprises that are investing in economic zones in Vietnam according to the criteria such as infrastructure, quality of public services, preferential policies, quality of labor, market and quality of social services. These criteria were assessed on a likert scale with five levels from 1- absolutely not good to 5 - very good. The survey was conducted from May 2016 to August 2016 with the surveyed subjects consisting of enterprises investing in coastal economic zones in Central Vietnam (including 3 economic zones: Nhon Hoi, Dung Quat, Chu Lai) and Phu Quoc economic zone. The authors have directly surveyed 100 enterprises with remarkable results as shown in the following (see Table 2).

Through the system of indicators in the survey results, we find that most enterprises have a difference between the assessment and the level of meeting the actual needs. Regarding infrastructure, the survey results show that although economic zones have made great efforts to improve quality, there are still some indicators that need to be taken into account, especially in the waterway system. With these criteria, the variance of assessment with the level of response is more than 1. This also comes from one of the necessary conditions for the development of the economic zone whereby it is necessary to build wharf, warehouses, wharves and waterway systems because these are coastal economic zones which take advantage of deep water ports to transport goods which reduce costs.

About policies and public services, through surveys and direct interviews with businesses, the authors found that the economic zones have made great efforts to reduce the administrative costs and created the best conditions for investment enterprises. All businesses interviewed had good comments on the services provided by the economic zone management board. However, the motto of "one-door, one stamp" is still unfulfilled due to the overlap in the implementation of the ministries and management sector as well as the many shortcomings in the assignment of rights to the economic zone management board. A remarkable point concerning fire prevention is the difference between the opinions and the level of response is quite high. This shows that the factors of production and labor safety should be improved by the economic zone management board.

<sup>1</sup> Source: Ministry of Planning and Investment. (2016). *Report on the establishment and development of the IZ, EZ on 7 months of year 2016*. Retrieved 3 October, 2016, from Ministry of Planning and Investment Website: <http://www.mpi.gov.vn/Pages/tinbai.aspx?idTin=33908&idcm=207>

<sup>2</sup> Source: Ministry of Planning and Investment. (2016). *Report on the establishment and development of the IZ, EZ on 7 months of year 2016*. Retrieved 3 October 2016, from Ministry of Planning and Investment Website: <http://www.mpi.gov.vn/Pages/tinbai.aspx?idTin=33908&idcm=207>

**Table 2:** Investor's assessment of business environment in economic zones.

No.	Evaluation Criteria	Evaluate	Level of responsiveness	Difference
<b>1</b>	<b>Infrastructure</b>			
1.1.	Road traffic system	3,92	3,77	0,15
1.2	Waterway transport system	4,30	3,14	1,15
1.3	Warehouse, port, and yard service system	4,41	3,13	1,27
1.4	Land and business premises	4,02	3,85	0,17
1.5	Electric supplying system	3,75	3,76	-0,01
1.6	Drainage system	3,55	3,48	0,07
1.7	Waste treatment system	3,70	3,60	0,09
1.8	Communication system	3,63	3,62	0,01
<b>2</b>	<b>Public service</b>			
2.1	Tax administration	3,63	3,63	0,00
2.2	Legal, administrative procedures	3,57	3,54	0,03
2.3	Consulting, solve problems	3,78	3,40	0,38
2.4	Ensuring security, social order and safety	4,02	3,75	0,27
2.5	Fire prevention	4,40	3,61	0,79
<b>3</b>	<b>Preferential policies</b>			
3.1	Corporate income tax incentives	4,29	3,82	0,47
3.2	Personal income tax incentives	4,38	3,80	0,59
3.3	Value added tax Incentives	3,92	3,44	0,48
3.4	Incentives on import and export taxes	4,00	3,64	0,36
3.5	Land incentives	3,75	3,67	0,08
3.6	Capital incentives, financial support	3,49	3,16	0,34
3.7	Support for clearance and complete the infrastructure	3,76	3,70	0,06
<b>4</b>	<b>Labor</b>			
4.1	Education system, training	3,56	3,52	0,04
4.2	Available labor	3,99	3,60	0,39
4.3	The level of labor meets the job requirements	3,89	3,46	0,43
4.4	Work experiences related work requirements	3,80	3,38	0,42
4.5	Responsibility and cooperative attitude	3,59	3,59	0,00
4.6	Observance of labor discipline	3,61	3,61	0,00
<b>5</b>	<b>Market</b>			
5.1	Market size of domestic market	3,03	3,34	-0,31
5.2	Access to domestic market	3,44	3,33	0,12
5.3	Market size of product consumption abroad	3,73	3,15	0,58
5.4	Access to foreign markets	3,63	3,16	0,47
5.5	Scale of available local materials market	3,67	3,23	0,44
5.6	Access to local materials markets	3,73	3,28	0,46
5.7	Market size of raw materials imported from other provinces	3,30	3,24	0,06
5.8	Access to raw materials market from provinces	3,35	3,30	0,05
<b>6</b>	<b>Social services</b>			
6.1	Business support services (market information, consultancy)	3,21	3,20	0,01
6.2	Education system	3,50	3,49	0,01
6.3	Health system, health care	3,54	3,54	0,00
6.4	Residence system for employees	3,13	3,11	0,02
6.5	Hotel system	3,47	3,43	0,04
6.6	Entertainment system	3,20	3,16	0,04

Source: Compiled from the survey results of the research group

Regarding preferential policies, there are two indicators that economic zones have done quite well, that is the preferential policy on land and support of ground clearance. This is due to the fact that the government has used the advantages available to attract investment which are land with favorable policies for businesses and cheap land rents along with long usage time for investors that were assured of production. The remaining elements of personal income tax incentives and corporate tax incentives also have differences. However, according to the authors, this is acceptable because it is one of the main sources of revenue contributing to local budgets. In addition, compared with businesses outside the economic zone, the level of incentives was appropriate.

On the labor force, it can be said that the current economic zones mainly use labor-intensive factors, with the advantage of cheap labor costs. Through surveys of enterprises, this is again demonstrated quite clearly by the difference in available labor force indicators with qualified and experienced employees. Those enterprises that require high quality workers face many difficulties due to limited labor supplies from the economic zones. Most of these workers must also be retrained. The good news is that Vietnamese labor satisfied the criteria of discipline and sense of labor that were expressed by the difference between the level of evaluation and response which were almost nonexistent.

About the market, it can be said that the output of the domestic market is very well appreciated, even exceed the expectations of businesses. However, the problem of access to foreign markets reflected in the criteria of scale and consumption in foreign markets still has a considerable gap between the assessment and the level of response. In addition, the issue of auxiliary materials for the industries is also quite clear in terms of scale and access to local materials. Meanwhile, in the whole country, businesses do not have difficulty accessing the materials market. This raises issues related to the development of supporting industries which serve the production of the business. Many lessons learned from economic zones in the world have shown that the development of enterprises in the same system, forming a chain from input to output, will create a superior system, resulting in strong local economic development.

About the social services associated with the economic zone, workers who are involved in the production process also have the need for fun, entertainment and social services. These are essential needs of the people. Domestically, these problems are solved quite simply when workers are not required to stay in dormitories but in their own homes located in surrounding areas which have a lot of supporting social services. With economic zones located as

inland as Phu Quoc, this is a problem that is very difficult to solve. The problem of attracting labor is not a simple matter as there are many different factors at play. However, one of the main reasons for the social services of the economic zones has not been finalized. The system of services to improve the quality of life for workers is very limited. As such, they do not feel attached to the working environment in economic zones. After a time they quit their jobs. Layoffs are also quite frequent, leading to businesses facing difficulties in recruiting and training new workers.

## 4. Conclusions and Recommendations

As a country that is in the process of development, mobilization of investment capital for economic development is a very urgent problem for Vietnam. In terms of limited national resources, the mobilization of investment capital from abroad especially the direct investment capital plays a very important role because this capital contributes to the attraction of advanced technology transfer from abroad to Vietnam, thus creating spillovers that help regional and local economic development. Therefore, the introduction of the model of economic zones are expected to solve the problem of attracting investment which will contribute to creating a diffusion of local, regional and territorial economies. However, in order to attract investment, it is important to create a favorable institution that ensures that investors develop production. The results of the survey conducted by the research team from the perspective of the investors have pointed out the limitations in terms of policy as well as the actual implementation. Based on these results, in order to do a good job of attracting foreign direct investment, we should focus on the following topics:

Firstly, implementing the "one-stop-shop" policy to avoid unnecessary procedures affecting the satisfaction of investors. The assignment of responsibilities of ministries and branches in the investment licensing are necessary to avoid errors and serious consequences, but the coordination between these units in fact has many inadequacies. Therefore, it is recommended that these procedures should be focused on Economic Zone Management Board to create favorable conditions for investors. However, it is not possible to loosen the operation of the management board which requires close supervision and inspection between agencies to ensure that the operation of the economic zone management board is within the permitted scope and not exceeding the provisions of law. Therefore, the main issue now is the need to develop the law and regulations on economic zone which includes provisions on the decentralization and supervision of the operation of the economic zone management board.

Secondly, continuing to improve the infrastructure of economic zones. Particular attention should be paid to the construction of waterway and seaport transport systems, as it is the gateway to transport goods and raw materials, thereby reducing the cost of production for businesses.

Thirdly, the concentration of many unskilled workers working in a certain area will lead to problems of social disorder. Therefore, there should be active measures to prevent and ensure the security of economic zones. In addition, we need to improve the quality of social services in order to improve the quality of life for workers in the economic zones, thereby reducing the state of insecurity and social order.

Fourth, implementing vocational training activities in the economic zones could contribute to an improved quality of labor resources. This activity was very well conducted in the Chu Lai Economic Zone, whereby Truong Hai Group has been providing vocational training and directly recruiting high quality laborers into the production process. However, in some other economic zones, the problem of labor is not easy to solve because the quality of human resources in place does not meet the needs of enterprises. Therefore, economic zones need to actively carry out training activities for employees before they could begin working in enterprises. To do this, the economic zone management board needs to understand the needs of the business to

coordinate with the training institutions to propose suitable courses that meet the needs of the business.

Fifth, attention should be paid to the development of supporting industries for the development of enterprises in the economic zone. Implementing a modern model while focusing on the businesses in the industry, as well as supporting industries in the same economic zone to form a unified area. The input of one business can also be the output of another business, which will create a circular system that supports harmonious development. If this solution is implemented, the economic zones will be able to achieve sustainable development as well as minimize the negative impact on the environment.

Finally, raising the quality of capital invested in the economic zone. Opening up and attracting investment is a right policy, but we also need a screening of objects invested. To do this, we need to have a screening mechanism for the investors. This is because not any investors in need can operate in the economic zones. In addition to the goals of creating jobs and increasing production, we must also screen out inappropriate investors who are not really for economic activity but may have other political goals. When investing, they need to ensure that they have specific and strict commitments on environmental issues and social responsibility for the locality.

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Print ISSN: 2288-4637 / Online ISSN 2288-4645  
doi:10.13106/jafeb.2017.vol4.no3.35

# Top-executives Compensation: The Role of Corporate Ownership Structure in Japan

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Received: June 16, 2017 Revised: July 31, 2017 Accepted: August 5, 2017

## Abstract

This paper explores the impact of corporate control, measured by ownership structure, on top-executives' compensation in Japan. According to agency theory, the pay-performance link is expected to be affected by the firm's ownership structure. Using a sample of 4,411 firm-year observations (401 firms for the 11-years period from 2001 to 2011) for Japanese non-financial firms publicly traded on the first section and second section of the Tokyo Stock Exchange (TSE), this study demonstrates that institutional ownership (both financial and corporate) is negatively related to the level of executives' compensation. Such finding is in line with *efficient monitoring hypothesis* which claims that the presence of institutional shareholders provides direct monitoring over managers, limits managerial self-dealing and curves the increase in top-executives pay. On the other hand, the results also show that managerial ownership is positively related to their compensation which supports *managerial power theory hypothesis*, i.e. management-controlled firms are more likely to extract more compensation from the business than other firms. Overall, this study confirms that corporate control has significant impact on cash compensation paid to Japanese top-executives after controlling the conventional pay-performance relationship.

**Keywords:** Executive Compensation, Corporate Performance, Corporate Governance, Ownership Structure, Japan.

**JEL Classification Code:** G30, J33, L20, M10.

## 1. Introduction

Executive compensation is a popular topic in both the popular press and the scholarly literature (Boyd, Santos & Shen, 2012). Nevertheless, the same has been less of an issue of concern in Japan, where the number of empirical research on executives' compensation is very few. One of the reasons might be the widely held perception that Japanese top-executives get very lower amount in comparison to their western counterparts. But, Jensen and Murphy (2010) argue that it is less important to focus on how much top-executives are being paid rather the real problem is how they are being paid. In addition, Japan is a country of particular interest not only because it has considerably lower levels of compensation than the US, but also because it has very different corporate governance

structure, characterized by insider dominated board and high institutional ownership. Therefore, further empirical research that contributes to the managerial compensation literature in Japanese context is expected to be highly appreciated.

Existing theoretical framework and empirical research have identified many hypotheses and determinants that explain the amount and structure of executive compensation in the corporate world. The use of Japanese data allows testing of the universality of those hypotheses and determinants in a country where different governance mechanism persists. Most of the previous studies in Japanese context have focused on relatively narrow aspects of the executive compensation process, i.e., testing the relative significance of accounting profitability or stock market performance (e.g., Abe, Gaston, & Kubo, 2005; Ang & Constand, 1997; Basu, Hwang, Mitsudome, & Weintrop, 2007; Joh, 1999; Kaplan, 1994; Kato, 1997; Kato, Lemmon, Luo, & Schallheim, 2005; Kato & Kubo, 2006; Mitsudome, Weintrop, & Hwang, 2008; Shuto, 2007; Xu, 1999). But, according to agency theory, the compensation-performance link is also affected by the level of firm's corporate control.

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The reason is that top-executives in firms with weak corporate control may persuade to ignore real corporate performance and set compensation according to their wish. Any study on managerial compensation which does not address the aspect of corporate control along with corporate performance is incomplete and dubious in findings. Sakawa, Moriyama and Watanabel (2012) claim that corporate control in Japanese companies is important for controlling executive compensation. Therefore, this current study tries to contribute to the existing literature by examining how the corporate control (measured by ownership structure) influences the level of top-executives' compensation in Japanese companies.

The paper has very interesting results. Corporate control is found to have a significant influence on managerial compensation of Japanese firms after controlling corporate performance. In particular, institutional ownerships measured by financial institutional shareholdings and business corporations' shareholdings have significant negative impact on top-executives' compensation which is consistent with '*Efficient Monitoring Hypothesis*'. On the other hand, in line with '*Managerial Power Theory Hypothesis*', directors (executive) shareholdings have the positive impact on top-executives' compensation. The findings clearly justify the role of corporate control as a determinant of on top-executives' compensation.

The remainder of this paper is organized as follows. Section 2 presents theory, prior studies, and hypotheses to be empirically tested in this study. Section 3 describes research design and sample characteristics. Section 4 presents empirical results, and Section 5 concludes the paper.

## 2. Theoretical Background and Hypotheses Development

Numerous studies have tried to identify the most important factors impacting executive compensation in the listed companies. Lazear (1986) argues that the appropriateness (optimality) of contingent performance based managerial compensation contracts depends critically on the degree of direct monitoring of the agent's action. The demand for incentives to align managerial interest will be relatively weak if control and regulation ensures that (Agrawal, Makhija & Mandelker, 1991). Therefore, it is also important to consider the level of corporate control, along with economic determinants, to explore how it influences the managerial compensation.

Ownership structure of business firms is often used in the empirical research as the proxy of corporate control. The types of owner and their holdings have significant influence

on corporate major decisions. Haid and Yurtoglu (2006) argue that the classical conflict between managers and dispersed shareholders is not pronounced in the firms, where large shareholders have substantial incentives and the ability to monitor the managers. Diamond (1984), Del Guercio and Hawkins (1999), and Almazan, Hartzell and Starks (2005) argue that institutional investors can provide direct monitoring and disciplining over managers, which is more difficult for other investors who are typically smaller, more passive and less-informed. Institutional investors can use various formal and informal mechanisms to influence management (Cubbin & Leech, 1983). This aspect is often denoted as '*Efficient Monitoring Hypothesis*'. In the absence of any control either internal or external, there exists an opportunity for senior executives to award themselves by pay raises that are not congruent with shareholders' interests. Bertrand and Mullainathan (2000) posit that the presence of large shareholders moderates the increase in CEO pay and limits managerial self-dealing.

There is a large body of literature in the international context examining the role of institutional and/or large owners in the determination of director pay (e.g., Conyon & He, 2011; Cosh & Hughes, 1997; Dong & Ozkan, 2008; Elston & Goldberg, 2003; Hartzell & Starks, 2003; Mehran, 1995; Ozkan, 2007). For US companies, Mehran (1995) finds that the use of incentive-based compensation also declines with the percentage of stock held by outsider blockholders. Hartzell and Starks (2003) provide evidence that the level of executive pay decreases with institutional ownership. In addition, Khan, Dharwadkar and Brandes (2005) also find that higher level of ownership concentration is associated with lower level of pay. For UK companies, Ozkan (2007) provides evidence that institutional ownership has a significant and negative impact on CEO compensation.

Contrary to the evidence provided by Hartzell and Starks (2003) and others, Gallagher, Smith and Swan (2005) find that institutional influence increases the level of compensation, and thus, conclude that institutions are not effective monitors of executive compensation in the US companies. Cosh and Hughes (1997) show that the presence of major financial institutions among owners make no appreciable difference to either the level of pay or the sensitivity of pay to performance in the UK companies. Based on Chinese evidence, Firth, Fung and Rui (2007) and Conyon and He (2011) find that executive pay and CEO incentives are lower in state controlled firms and firms with concentrated ownership structure. In German context, Schmid (1997) indicates that bank ownership insulates managers from effective disciplining, and thus, has a positive impact on the level of pay. In contrast to evidence provided by Schmid (1997), Elston and Goldberg (2003), and Haid and Yurtoglu (2006) find that bank influence in

German firms has negative impact on compensation. They also confirm that block ownership restrains compensation. Based on 75 largest Dutch firms for the period 2006-2008, Knop and Mertens (2010) find that the presence of external block-holders significantly lowers the levels of total CEO compensation. In a review paper, Goergen and Renneboog (2011) claim that most of the existing literature supports that the executives are able to extract rents in the presence of weak corporate governance. They also argue that the increase in CEO pay is highest in firms without large shareholders as the latter are instrumental in preventing excessive rent extraction.

In Japanese context, limited research has investigated at how the volume of institutional ownership affects executive compensation. Abe et al. (2005) argue that when outside monitors can observe the behavior of directors, the relative importance of financial performance in executive compensation contract will be smaller. Based on the early 1980s Japanese firms' data, Kato (1997) find the evidence that the compensation paid to directors is significantly smaller in the companies with keiretsu or cross-corporate shareholdings. Basu et al. (2007) and Sakawa and Watanabel (2008) report that the monitoring role of banks facilitates the reduction of top executive compensation for Japanese nonfinancial firms in the 1990s. These earlier findings in the literature suggest that Japanese banks served a substitute role for incentive compensation packages in the 1990s through substantial stockholdings. In contrast, using very recent but small number of firm observations, Sakawa et al. (2012) find that the bank ownership do not substitute for incentive compensation, unlike in the 1990s in Japan. So, it is really commendable to investigate the relationship between institutional ownership and managerial compensation level of Japanese firms based on recent and large samples. Recent corporate ownership survey (2011) by Tokyo stock exchange (TSE) shows that, on average, the largest shareholders in a firm owns more than 50% of the issued shares. Furthermore, the financial institutions and the business corporations are the largest shareholder in many listed firms. Thus, it is expected that financial institutions and the business corporations usually have effective control on the listed Japanese firms. Based on the above discussion, we can form hypotheses like:

*H-1: Ceteris paribus, top-executives' compensation (cash) is significantly associated with financial institutional ownership.*

*H-2: Ceteris paribus, top-executives' compensation (cash) is significantly associated with business corporate ownership.*

Bebchuk, Fried and Walker (2002) and Bebchuk and Fried (2004) consider another dimension of corporate control i.e. managerial control which influence executive compensation. Ferris, Kim, Kitsabunnarat and Nishikawa (2007) conclude that managerial power effects are present in the design of executive compensation. Management-controlled firms are more likely than owner-controlled firms to extract more compensation from the business. Williamson (1964) and Monsen and Downs (1965) argue that the managers of large corporations with diffuse ownership have considerable discretion in guiding the affairs of their firms and that discretionary power is used to divert some resources from corporate shareholders. This is often denoted as '*Managerial Power Theory Hypothesis*'.

Japanese commercial law requires that the top-executives' compensation in the listed firms should be designed by the board of directors, and the ceiling of maximum gross compensation should be approved by the shareholders. As most of the board members in Japanese companies are also top-executives, it is expected that top-executives would have significance dominance over pay-settings. Sakawa et al. (2012) mention that lack of independence of the board from the company's top-executives might be a cause of greater managerial power in Japanese companies. Moreover, when the top-executives own shares in the companies, the ability to control the amount of compensation raise further as they can substantially control the shareholders' approval on any amount of managerial compensation. Grabke-Rundell and Gomez-Mejia (2002) point out that executive power, such as their stock ownership, is an important determinant that comes into play when designing executive compensation. However, this aspect of managerial control has not been explored yet in the Japanese context. Therefore, it is also important to investigate the effect of managerial control on the compensation level of Japanese top-executives. From this point of view the next hypothesis to examine empirically is:

*H-3: Ceteris paribus, top-executives' compensation (cash) is significantly associated with their share ownership.*

### 3. Research Design

#### 3.1. Basic Equation

Any statistical model of the relation between compensation and its determinants must begin with the equation describing pay for the managers. A general form for the compensation equation in this paper to test the before-mentioned hypotheses is:

Compensation

=  $f(\text{Corporate Performance, Corporate control, Firms}$   
– *specific Characteristics*)

### 3. 2. Empirical Models

Based on the basic equation in sub-section 3.1, in this section, this study constructs empirical as following:

Model 1 :

COMP=

$$\alpha_0 + \beta_1 EARN + \theta_1 Dir\_Own + \theta_2 Fin\_own + \theta_3 Corp\_Own + \sum \delta_j Control\ variables + \sum \gamma_j Industry\ dummies + \sum \phi_j Year\ dummies + \varepsilon$$

### 3.3. Variable Descriptions

#### 3.3.1. Dependent Variable: Executive Compensation (COMP)

In Japanese context, there is a wider application of cash incentives which represent the major portion of managerial compensation. In contrast, the use of stock based compensation is very limited and insignificant in the total compensation package.<sup>2</sup> Moreover, there is no publicly available data on CEO and individual compensation in Japan. Only cash compensation data, including all directors (top-executives) are available in the Nikkei NEEDS database. That's why, this study focuses on cash compensation paid to top-executives of Japanese companies. This study measures top-executives' cash compensation (COMP) as the sum of salary and bonus earned by all directors, deflated by total assets.

#### 3.3.2. Research Variable: Corporate Performance (EARN)

Net income deflated by total assets (denoted in this study as "Earnings") is commonly used proxy of accounting performance. This study applies the same proxy to measure corporate performance.

<sup>2</sup> The main components of Japanese managerial compensation have been cash salaries and bonuses. Until 1997, Japanese Commercial Law prohibited Japanese companies to use stock options as compensation component. Even though, stock option has been allowed subsequently, but the proportion of stock options in the total compensation package has consistently remained very small and not widely used in Japanese companies.

#### 3.3.3. Research Variable: Corporate Control

In this study, corporate control can be addressed from two perspectives: managerial control and shareholder control. Greater managerial control allows managerial dominance over the pay setting process, and thus, could reasonably increase the overall payment to top-executives. Japanese Commercial Act provisions that top-executive compensation will be determined by the board of directors and the ceiling of the gross payments will be approved by the shareholders. Japanese boards are historically dominated by insiders who are also the top executives. As most of the board members are internally promoted top-executives and there is no mandatory provision of independent remuneration committee, it is pretty much possible that top-executives will have to tendency to extract more compensation in the absence of any control. Therefore, this study considers ownership by directors (denoted as "Dir\_Own") as a proxy of managerial power over pay settings. According to managerial power theory hypothesis, this study expects to find a positive significant relationship between managerial compensation and directors' ownership.

On the contrary, according to the current ownership structures of Japanese companies, almost fifty percent of their outstanding shares are owned by financial institutions and business corporations. Several empirical studies support that institutional owners are very dominating in Japanese companies to control the overall operating and financial decisions. According to efficient monitoring hypothesis, controlling shareholders have the incentive, ability and expertise to control the behavior of the managers to extract more compensation from the business. This study expects that institutional ownership which has been defined by financial institutional ownership (denoted as "Fin\_Own") and business corporation ownership (denoted as "Corp\_Own") will have significant impact on top-executives' compensation.

#### 3.3.4. Control Variables

This study uses several firm-specific control variables in the empirical model to control the micro-economic or firm-specific conditions. Uchida (2006) argues that Japanese companies are more reliant on debt financing and that the agency costs of debt is a central issue in corporate governance. As a firm's agency cost of debt increases, it reduces the tendency of the managers to get more compensation from the firm. Therefore, this study adopts the proportion of total liabilities to total assets (denoted as "Leverage") as a proxy of agency costs of debts or debtholder monitoring.

The relationship between firm size and managerial compensation is confounding. While some researchers argue that larger firms are more inclined to give more compensation to their executives, others argue that larger firms are more subject to greater monitoring and institution control which reduce the tendency of managers to extract more compensation. It is also argued that in small and medium companies, top executives are all in all to set their compensation as large as possible, but the same is not possible in large firms. In Japanese context, Sakawa et al. (2012) finds that firm's size negatively linked with managerial compensation. This study applies natural logarithm of total sales, as a proxy of firm size (denoted as "Size").

This study also includes another control variable which is defined as the proportion of total operating cash flow to total assets (Cho, 1998; Davies et al., 2005), as a proxy of firm liquidity (denoted as "Liquidity"). Liquidity measure whether the level of firm's operating cash flow has any significant impact on managerial compensation or not. In addition, industry dummies and year dummies are included to control for the industry-specific and time-specific macro-economic conditions that might have some influence on empirical findings.

### 3.4. Sample Selection and Source of Data

The firm-wise data is extracted from the Nikkei NEEDS database. The Nikkei NEEDS data are sourced from annual company reports. The selected non-financial firms are subdivided into industry sectors according to Tokyo Stock Exchange (TSE) industry classifications. Initial sample is adjusted to exclude the firms with following criteria: having fiscal year end other than March and having insufficient or missing data for the whole period under this study. Adjustments are also made in the sample for some variables with top and bottom 1 percent outliers. The selection process yields 4,411 firm-year observations (401 firms for the 11-years period from 2001 to 2011) for Japanese non-financial firms publicly traded on the first section and second section of the TSE. Table 1 details the breakdown of observations across different industry-sectors.

## 4. Empirical Results and Discussion

### 4.1. Descriptive Statistics and Collinearity Results

Table 2 presents descriptive statistics of sample firms. The average of total cash compensation (scaled by total assets) across entire sample is 0.4 percent. Regarding corporate performance variables, the average of net income

**Table 1:** Industry wise Sample Classifications

TSE-Industry Name	Observation	Percent	Cumulative Freq.
Chemicals	396	8.98	8.98
Construction	528	11.97	20.95
Electric Appliances	286	6.48	27.43
Electric Power & Gas	165	3.74	31.17
Foods	154	3.49	34.66
Glass & Ceramics Products	132	2.99	37.66
Information & Communication	110	2.49	40.15
Iron & Steel	132	2.99	43.14
Land Transportation	99	2.24	45.39
Machinery	352	7.98	53.37
Marine Transportation	77	1.75	55.11
Metal Products	143	3.24	58.35
Nonferrous Metals	66	1.5	59.85
Other Financing Business	33	0.75	60.6
Other Products	99	2.24	62.84
Pharmaceutical	77	1.75	64.59
Precision Instruments	66	1.5	66.08
Pulp & Paper	77	1.75	67.83
Real Estate	77	1.75	69.58
Retail Trade	154	3.49	73.07
Rubber Products	33	0.75	73.82
Services	220	4.99	78.8
Textile & Apparels	110	2.49	81.3
Transport Equipment	231	5.24	86.53
Warehousing and Harbor transportation	121	2.74	89.28
Wholesale Trade	473	10.72	100
Total	4,411	100	

(scaled by total assets) across entire sample is about 2.3 percent. Regarding stock ownership variables, the average of directors' ownership is about 4 percent. Ownership by financial institutions is about 26 percent and ownership by business corporations is about 27 percent, indicating the strong control of institutional shareholders on Japanese companies. Regarding firm characteristic variables, the average of firm size (measured by firm's sales) is 229,820 million yen. The average of leverage is about 58 percent, which is almost an identical value to that reported by Basu et al. (2007). This implies that the Japanese firms are still largely dependent on debt financing. The average of liquidity ratio, measure by operating cash flows to total asset ratio, is around 7 percent.



**Table 2:** Descriptive Statistics

Variable	Mean	Standard Deviation
COMP	0.004	0.004
EARN	0.023	0.073
Dir_Own	0.039	0.075
Fin_Own	0.269	0.135
Corp_Own	0.258	0.165
Size	10.80	1.427
Leverage	0.569	0.187
Liquidity	0.068	0.075

One important consideration in the empirical research is whether the variables are subject to collinearity effect. When multicollinearity exists between two independent variables, the predictive power of a particular independent variable is reduced by the extent to which it is associated with the other independent variable. To assess for the presence of multicollinearity, tolerance value and the variance inflation factor (VIF) are examined. For brevity, this study does not report the results of multi-collinearity check. The study finds that the maximum VIF value is 2.90 for EARN. According to Hair, Anderson, Tatham, and Black (1998), VIF values greater than 10 indicate a multicollinearity problem. As VIF values for all the variables do not exceed the generally accepted threshold, this suggests that there is no multicollinearity problem among the independent variables.

## 4.2. Regression Results

Table 3 represents the results of regression analysis in this study. As expected, the coefficient on 'EARN' is significantly positive at less than the 0.01 level. The result suggests that firms with higher levels of accounting performance or net income appear to pay greater managerial compensation than firms with lower levels of net income. The results show that the coefficients of 'Fin\_Own' as well as 'Corp\_Own' are significant and negatively associated with the compensation level (COMP). These findings are consistent with the 'efficient monitoring hypothesis' which argues that institutional owners play controlling role in the firms and prevent managers from enjoying more compensation. On the other hand, the study also finds that the coefficient of 'Dir\_Own' is significant and positively associated with the compensation level (COMP). This result is consistent with managerial power theory hypothesis which argues that the greater ownership by executive directors entails greater managerial control over pay settings, and thus, allows the managers to extract more compensation.

**Table 3:** Regression of the sensitivity of the level of total compensation on firm performance and corporate control

Variable	Model-1	
	Coefficient	t-stat
COMP(dependent variable)		
EARN	0.0191***	10.36
Dir_Own	0.0045***	4.73
Fin_Own	-0.0056***	-9.64
Corp_Own	-0.0011**	-2.5
Size	-0.0016***	-29.66
Leverage	0.0002	0.73
Liquidity	-0.0007	-0.75
Constant	0.0227***	30.88
Industry dummies	Included	
Year dummies	Included	
Adjusted R-squared	0.482	
F-statistic	73.65	
Observation(N)	4,411	

Note: (1) The t-statistics given are based on the heteroskedasticity-consistent standard errors of White(1980); (2) The symbols \*, \*\*, \*\*\* denote significance at the 10%, 5% and 1% level, respectively.

With respect to the control variables, the coefficient on "Size" is significantly negative in all models, which indicates that larger firms pay less to managers than smaller firm, and vice-versa. These findings are consistent with the argument that large firms are subject to more outside monitoring and less managerial discretion that lead to lower managerial compensation. This study fails to justify any impact of costs of debt on top-executives' compensation level as the coefficient of on "Leverage" is not significant. Moreover, the evidence shows that the "Liquidity" has no significant effect on the level of compensation.

## 4.3. Robustness and Further Analysis

Because the regression analysis are based on 11 years of pooled, cross-sectional data in which the same firm can appear multiple times in the sample, observations may not be independent both cross-sectionally and over different years. This procedure may involve cross-sectional (spatial dependence) and auto correlation (serial dependence) problems (Shuto & Takada, 2010). Papers by Thompson (2011) and by Cameron, Gelbach and Miller (2011) suggest a way to account correlations among different firms in the same year and different years in the same firm. To control for time-series as well as cross-sectional correlation simultaneously, this study further run pooled regressions with t-statistics based on standard errors clustered at firm and year levels (two-way clustering). The results reported in Table 4 suggest that the findings are qualitatively similar.

**Table 4:** Regression of the sensitivity of the level of total compensation on firm performance and corporate control (Two-way Clustering)

Variable	Model-1	
	Coefficient	t-stat
COMP(dependent variable)		
EARN	0.0188***	5.05
Dir Own	0.0053**	2.48
Fin Own	-0.0058***	-4.1
Corp Own	-0.0015	-1.37
Size	-0.0015***	-12.78
Leverage	0.0004	0.51
Liquidity	-0.0007	-0.71
Constant	0.0214***	14.12
Firm-wise clustering	Yes	
Year-wise clustering	Yes	
Adjusted R-squared	0.437	
F-statistic	27.54	
Observation(N)	4,411	

Note: (1) The t-statistics given are based on standard errors with firm-level clustering for arbitrary serial-correlation and year-wise clustering for contemporaneous-correlation(two-ways clustering); (2) The symbols \*, \*\*, \*\*\* denote significance at the 10%, 5% and 1% level, respectively

## 5. Summary and Conclusion

The dearth of research exploring the relationship between top-executives' compensation and corporate control encourages the author to do research in this field based on Japanese data. Empirical findings examining the compensation-corporate control link suggest that greater director ownership signifies managerial dominance scenario which is associated with greater compensation in Japanese firms. However, controlling shareholders (financial and corporate shareholders in Japanese context) restrain the behavior of top executives to extract more compensation, and thus, has significant negative effects on compensation in Japanese companies. While prior research on top-executives' compensation in Japan is narrowly focused and mixed in findings, current evidence provide broader and contemporaneous insights in this aspect with more rational findings. This study definitely contributes to the existing literature of managerial compensation by addressing the roles of corporate control along with corporate performance in determining top-executives' compensation in Japanese firms.

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Print ISSN: 2288-4637 / Online ISSN 2288-4645  
doi:10.13106/jafeb.2017.vol4.no3.45

# The Role of Quality of Relations in Succession Planning of Family Businesses in India

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Received: July 17, 2017 Revised: August 1, 2017 Accepted: August 5, 2017

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## Abstract

Considerable research has been done on the issue of succession in family businesses. However the process of induction, of preparing the members of the next generation for joining the family business has not been examined in detail. This paper attempts to analyse the relevance of three critical factors – ‘quality of relations’, ‘willingness of the inductee’ and ‘the ability to manage tensions harmoniously’ - to the induction process and the progress of the business. It focuses on the Indian context, specifically in the Small and medium Enterprise (SME) area. Qualitative research has been carried out. The Case Study method is used and data has been gathered from two families (including two branches of one family), using frequent unstructured interviews, over a period of five years. It is concluded that positive impact on business, family and the inductee depends to a large extent on the quality of relations, willingness of the inductee and the ability of both the inductor and inductee to handle and manage the tensions. Thus the findings of the study extend current understanding about succession drivers to the specific context of eastern cultural and developing economy represented by the Indian family businesses in the small and medium enterprise sector.

**Keywords:** Family Business, Personnel Management, Succession Planning, Induction, Small and Medium Enterprises, Corporate Culture, India.

**JEL Classification Code:** M12, M14, M16.

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## 1. Introduction

In all economies of the world, family businesses play an important role in creating wealth (Van der Merwe, 2011). They are also found to be the most dominant form of business (Lee, 2006). The family businesses represent between 65 to 80 percent of the business enterprises all over the world (Dreux, 1990; Timmons & Spinelli, 2007). As per a study by Malhotra (2010) 80% of all businesses worldwide are family businesses. Both in developed countries like USA, UK etc. and developing countries like India, Pakistan, Bangladesh, Sri Lanka etc., family

businesses play a significant role in the growth of the economy (Miller & Le Breton-Miller, 2005).

Within the research available, one of the most significant problems identified with family business is about the continuity of the business. This paper attempts to identify, through qualitative research, the critical psychological factors that influence the succession process, with particular focus on the preparation of the next generation to be inducted in the business. The founder has a significant influence on the firm including its culture, values and performance (Schein, 1995). Ensuring continuity of the family business after the founder has been seen as a major challenge (Ward, 2011; Birley, 1986). Most family businesses are not able to pass the reins of the business effectively to the next generations (Villalonga & Amit, 2006).

With the changes in the environment such as advent of globalization, shift in technology etc., ensuring continuity of the business has become a deeper challenge for all forms of business. But it gets magnified in the case of family business due to the additional factors of family emotions and mutual impact of family on business and vice versa, making continuity over generations difficult (Salvato & Melin,

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2008). As the concern about continuity is so significant, it is obvious that over the years a large part of research within the area of family business has attracted the attention of researchers to the aspect of succession and continuity. Researchers have examined these aspects from both empirical and anecdotal angles in a bid to arrive at satisfactory answers. It has been argued that succession planning is critical (Tatoglu, Kula, & Glaister, 2008). Succession planning is like a journey, which unless meticulously planned, can go haywire and result in an undesired end. The process of succession comprises myriad issues, each to be handled precisely else there are high chances of the situation going downhill. As per Lam (2011) a number of variables have been identified but little causal insight is offered that helps us to understand the family–business–succession nexus.

Studies on succession process have mainly been viewing the process from two different viewpoints. Some researchers believe that succession is a one-time event. When the time for succession comes, the management and ownership of the business is transferred from one generation to another (Dyck, Mauws, Starke, & Mischke, 2002). As opposed to this view, some researchers view succession as a process and not as a single event (Gersick, 1997; Sharma, 2004). The succession process is commonly described as consisting of several phases that most often contain elements of initiation/preparation, integration, joint management and finally retirement of the predecessor (Cadieux, Lorrain, & Hugron, 2002; Murray, 2003).

However, in going through the literature extensively, it was discovered that the greatest proportion of the literature involves studies in western context. Succession process, to a large extent, also depends upon differences in culture, social milieu and practices that differ a lot from one country to another. The commonly accepted fact is, that there are cultural differences between east and west. The two cultures from the opposite sides of the world, exhibit significant differences when compared on the parameters of high-context v/s low-context communication, individualism v/s collectivism, equality v/s hierarchy and assertiveness v/s interpersonal harmony (Qingxue, 2017). There are several divergent points between the two cultures, one of the most important being the strong individualism in the west v/s distinctive collectivism in the east (Chang, 2010).

This highlights the significance of conceptualizing family business succession in the context of eastern culture and a developing economy. As such we decided to focus the study of Indian family business which represents both these contexts. After interacting with a large number of Indian Family businesses, we realized that various special issues relating to the Indian context could be identified. Further, we decided to focus on the Small and Medium Enterprise (SME)

segment, as firms within this segment have their unique context and constraints.

During our firsthand interactions with Indian SME Family Businesses, we found that much before the issue of succession surfaces; there is another issue of inducting the next generation members into the business. Post-induction comes the challenge of two generations learning to work together, for a period which at times extends to almost two decades. Succession comes only post the co-working phase. In other words, there are two primary concerns, i.e., first, how to effectively induct the next generation members in the family business and second, how to ensure smooth working together for a long period before the issue of formal succession comes up. With the above concerns as the backdrop, this study attempts to focus on the first issue i.e., effective induction of the next generation members in the family business.

There is a plethora of studies in the literature about factors that could affect the succession process (Sharma et al., 2001). However, there are not many studies available on the specific issue of preparation of the next generation member for induction into the family business. So, by extrapolating and making logical connections among the available studies we identified the factors that affect succession and are likely to affect the induction as well. Hence amongst the factors identified from earlier studies; this paper attempts to identify and analyse the relevance of three critical factors – ‘quality of relations’, ‘willingness of the inductee’ and ‘the ability to manage tensions harmoniously’ - on the induction process.

These are further analysed as follows: A conceptual argument can be made for a mutual dependence among these three factors.

Quality of relations
Inductee listening to and valuing the advice of the inductor
Inductee seeking the guidance and support of the inductor
Inductee appreciate of inductor giving frank feedback
Inductee complaining about the conservatism of the inductor
Inductee complaining about the inductor not giving him enough power
Inductee overconfident and complaining
Inductee thinking that the inductor's way of doing business is not appropriate
Inductee's willingness
Inductee keen to join the business
Inductee taking interest in the business from very young age
Inductee willing to put the hard work required in the business
Inductee keen to learn the nitty-gritty of the business
Tensions
Existence of tensions
Ability and willingness to harmoniously manage the tensions

## 2. Research Scope

This study is concerned with the induction process of family members from the next generation who may go on to succeed the incumbent leader. It takes into consideration the Indian business context and the Indian social context. Large organizations have well-developed organizational structures and access to resources for managing the business and associated issues like transition and succession. In contrast, SMEs lack structure and resources and also options for transitions. This study focuses on the induction process in SMEs.

### 2.1. Indian Business Context

Before independence, India was a British colony which served as a source for cheap raw materials and market for finished products. Industrialization was not encouraged by the rulers for their self-serving economic reasons. Limited industrialization was the outcome of colonial power and their managing agencies for their selfish motives in India (Kudaisya, 2011). After India attained independence in 1947, the government gave priority to public sector enterprises for creation and growth of industrial infrastructure. Private sector enterprises, limited in numbers and proportion, were dominated by a few big family businesses backed up by large groups such as Tata, Birla, Sahu Jain, Walchand, Thapar, Singhanian, Goenka etc. (Manikutty, 2000). The Indian Government, in pursuit of socialism, went on to nationalize a large number of industries in the private sector; further reducing the private sector's importance in the economy. The growth of private industries in India was not only discouraged, it was highly restricted too with stringent regulations promulgated by the government. The wars of 1962, 1965 and 1971, further derailed the business environment in the country.

The business environment experienced some relaxation only in the late 1970s. So, by early 1980s a number of new families entered business and industry. Even though this may be regarded as the initial growth phase of family businesses, their purpose was restricted to earning the family livelihood. It was only after July 1991, when the Government of India liberalized the economy that these businesses grew rapidly (Manikutty, 2000). Family businesses experienced the much-needed growth momentum in the post-liberalization era. Thus, a majority of the Indian family businesses may relatively be deemed young and consequently have different and diverse challenges as compared to the family businesses in the West.

All the above reasons render the business practices and business methodologies of the Western world impossible to directly transpose to the Indian context. Survival and success in such adverse environmental conditions requires novel survival techniques and adaptations; hitherto unseen in any developed economy.

### 2.2. Indian Social Context

India, like many other countries in the eastern part of the world, values strong family ties. The social set-up in India traces back its roots to the three aspects of the agrarian society namely caste, *jajmani* and *panchayat*. The caste system pre-ordained the occupation that members of a family were expected to follow. The different constituents of society had a peculiar relationship as they were mutually dependent on each other – this was the *jajmani* system. The *panchayat* system represents a local body of elders, to whom locals defer to for local law-making and justice-dispensing. The impact of these three systems can be seen on the traditional Indian system of a joint family (Karofsky, 2000). The Indian joint family system mirrors these three aspects of society. Much like the caste system, the role of each family member is generally defined, accepted and adhered to. Like the *jajmani* system, the relationships within a family are mutual and dependent on each other. And just as in the *Panchayat* system, in an Indian joint family, the head of the family is looked up to and accepted as the final authority. The head of the family is expected to be fair, objective and equitable. The family is supreme, family harmony is highly valued and strong relationships within family members are inculcated and cherished. In this family system there is also a trace of Confucian values where a subordinate, be it son or junior, gives respect and obedience to the superior and he, in turn, gives them protection and due consideration (Phan, 1999).

As there is no state welfare support, the dependence on the family and community is higher. Family and community acts as a safety cushion in times of need. If one loses income and wealth due to any unforeseen circumstances, a ready help can be expected, and is available, only from these sources. Age related or medical emergencies are, as a norm, attended to and managed by the family. All this determines, defines and increases the importance of strong family fabric bonding and relations. In the last few years, as the winds of change sweep the Indian society and Indians get more influenced by the western world, the joint family system is under serious threat. But most families still continue to hold on to values based on the traditional family system like responsibility to other family members, mutual adjustments, parents - children relationship of mutual dependence, respect for elders etc. Thus, Indian family



businesses, much like our societal set-up, follow more “relation-based practices” as opposed to “task-based theories” of the west.

### 2.3. SME Segment

Globally, the vast majority of the family businesses are small or medium-sized firms (Bjuggren & Sund, 2000). Depending on the economic development of the country, the definition of SME varies from country to country (Dixit & Panday, 2011). The definition generally depends upon certain key factors like the number of full-time employees on roll, investment in plant and machinery, sales turnover etc. (Bharathi & Parikh, 2012).

These enterprises, as the term SME implies, differ from larger corporations in their size. Difference in size leads to other operational differences. In comparison to larger organizations, the SMEs find it difficult to employ specialists for want of adequate resources. These businesses also find it difficult to afford high-quality management talent. Even if affordability is not an issue, it is difficult for SMEs to attract and retain the right kind of talent who can adjust to the SME's realities. As a result, in most SMEs, the owners, by force, need to play the dual role of owner manager. The owner and other family employees are often responsible for different management tasks and important decisions (Sharifi, 2014). Thus, in an SME, the need and the process of inducting family members in the business is not so much of a choice as much as it is a need. As compared to larger corporations, the need and process of including family members in SMEs is quite different and warrants specific attention.

## 3. Literature Review

Research has led to the identification of several factors that are likely to impact effectiveness of succession. This involves transfer of tacit knowledge (Brockhaus, 2004; Haberman & Danes, 2007; Royer et al., 2008; Yan & Sorenson, 2006), quality of relations (Grote, 2003; Handler, 1991; Lambrecht, 2005), willingness of the successor (Kansikas & Kuhmonen, 2008; Royer et al., 2008; Venter, Boshoff, & Maas 2005), stage of induction (Royer et al., 2008), process of succession (Higginson, 2010; Lambrecht, 2005; Mazzola, Marchisio, & Astrachan, 2008; Van Der Merwe, 2011), gender and birth order of the successor (Danes & Olson, 2003; Haberman & Danes, 2007; Nicholson, 2008), situational factors (Davis, Allen, & Hayes, 2010; Gupta & Levenburg, 2010; Kansikas & Kuhmonen, 2008; Venter, Boshoff, & Maas 2005), raising up process

within the family business culture (Kansikas & Kuhmonen, 2008; Lambrecht, 2005), status of extended family (Danes & Olson 2003; Haberman & Danes, 2007), and the tensions experienced (Danes & Olson, 2003; Grote, 2003; Nicholson, 2008; Venter, Boshoff, & Maas, 2005).

From amongst the above referred factors, this study focuses on three specific factors named earlier, i.e.:

- ‘quality of relations’,
- ‘inductee's willingness to join the family business’
- ‘ability to manage tensions harmoniously’.

### 3.1. Quality of Relations

One of the critical factors in determining the effectiveness of the induction process is the quality of relationship between the current and the next generation family member who is being inducted. A good relationship would mean trust, good communication, support, help, guidance, mentoring, feedback and mutual respect. It also assumes openness to mutual learning. On the other hand, difficult and complex relationships mean criticism, judgment, conservatism, lack of support, narcissism, and lack of trust. Often underlying these qualities is a general difficulty of communicating between the parent and next-generation family members (Handler, 1991).

The way the children receive upbringing at home affects their future relationships with parents and elders in the family. They observe how their parents and others in the family deal with business issues. They learn about the history of the business, the culture, values and role of the business in the family life (Lambrecht, 2005). If the family is always excited about the business and the discussions are pleasant amongst different generations in the family it is likely to encourage the children to look forward to joining the business. On the other hand, if the family witnesses constant tensions and stress related to the business the possibility of joining the business may be perceived as a burden. During the induction if the successor gets adequate room to move, freedom to make mistakes and discover his own self, it would make the induction a pleasant experience for him. However, in turn, he has to demonstrate respect for the previous generation, taking responsibility, willingness to learn and genuine appreciation of the culture.

The relation between the parent and the child is often affected by family rivalry theory, as propounded by Girard (2003). The parent wants the child to be like him and also not to be like him. In the same way the child wants to be like the father who is a model and also not to be like him as he is an obstacle (Grote, 2003). For Girard, the degree of conflict is also dependent on the closeness. Closer the relationship, higher is the conflict. As a result the child may

end up complaining that the parent wants him to take the responsibility but does not pass over the required authority. On the other hand, the parent will want the child to take the charge but also want to remain involved in the business. It is no surprise that in a study by Handler (1991) only 10% of the individuals in a study had a positive and productive relationship with their parents (Handler, 1991).

Another important aspect affecting the induction is the attitude of the parents. If the parents do not support the child to take up an important role, s/he is unlikely to succeed. In fact the personal relations among family members often take precedence over the business interest (Brockhaus, 2004). The relation between the two generations involved plays an important role in the process of induction. A good personal relation between the two will contribute in the development of the next generation. During the process of induction, it is important that the member of the next generation is feeling included in the family business. Inclusion deals with whether s/he feels as a part of the business or apart from the business (Haberman & Danes, 2007). The sense of trust and fellowship in the relationship goes a long way in successful induction. Mutual trust and honesty leads to favorable relationship and creates a good environment for mutual learning. A number of studies have shown that the quality of interpersonal relation between the family members directly influences the success of the induction process (Royer et al., 2008). The process of transfer of knowledge from the current generation to the next generation is facilitated by a strong, positive relationship between them which is based on open, constructive communication, mutual respect, sensitivity to each other's needs, shared values, and reasonable expectations (Higginson, 2010).

### 3.2. Inductee's Willingness

Willingness of the inductee to join the family business has been identified as one of the most important factors influencing the success of the succession process (Handler, 1991; Venter, Boshoff, & Maas, 2005). It has also been found to be critical for the satisfaction of the incumbent as well as the incoming generation (Sharma, Chrisman, & Chua, 2003). Further it has also been found to have a bearing on the well-being of the business (Brannon, Wiklund, & Haynie, 2013). It has been argued that the will and motivation of the inductee is a key determinant in the process of induction. Further the abilities and intention of the inductee along with the alignment of his/her personal needs will help in more effective induction (Kansikas & Kuhmonen, 2008).

Many business families induct the next generation members from early childhood. Initially they may come to

the business for fun. But as they grow up they start playing small roles in the business. Such early business socialization plays an important role in the willingness of the incumbent (Haberman & Danes, 2007). The relations within family have an important influence. If the family is cohesive and spends considerable time in discussing about the future of the family business, the children develop interest in the business and are likely to have higher willingness to join the business and learn about it (Lee, 2006).

Effective transfer of knowledge and induction in the business also depends on the individual need, goals, skills and abilities of the inductee. His integrity and commitment to business is an important driver in the success of the induction process (Brockhaus, 2004). While discussing about the individual needs, it is important to point out that the need to belong and acquire status are both fundamental to humans and joining the family business is likely to satisfy these needs. However there is no guarantee that the inductee will share the interest and motives of the previous generation (Nicholson, 2008). There is also a psychological side to the issue. The inductee is likely to have a desire to be like 'dad' on one hand and have his/her own dreams and style on the other. It is common for the child to face a paradox wherein the parents generally encourage him or her to take charge but are hesitant in giving up the control. On the other hand, the parent can complain that the kids want all the power but are not putting in enough efforts required to justify the same (Grote, 2003).

As per Handler (1991), the succession process is more likely to be successful, where the relationship between the incumbent and the successor is healthier, characterized by respect and understanding, as in that case each one feels supported and recognized and more satisfied. Within family firm literature, the impact of the technical skills and capabilities of the successor on the effectiveness of the succession and continuation of the firm has been widely studied (Barach & Ganitsky, 1995; Chrisman, Chua, Pearson, & Barnett, 2012). However the impact of relation as referred as relational competence that will affect the willingness on the part of the inductee on the effectiveness of the succession has been ignored (Hatak & Roessl, 2015).

### 3.3. Ability to Manage the Tensions Harmoniously

There are often tensions between the two generations. And there is a paradox of the tensions. Some tensions are required and foster constructive climate with an element of challenge. It provides possibilities of different perspectives and contributes to learning of both generations. On the other hand those tensions can create an environment of lack of

trust and fellowship which could lead to frustration (Danes & Olson, 2003). The critical point is that at what point the constructive tensions turn into destructive tensions.

Conflict is natural to human relationships and the family is no exception. However if the conflict results in tensions then it could be detrimental. The tensions within the family are likely to affect the induction process and its outcome. If the parents do not have trust in the successor's ability it could result in tensions that could affect the induction and the eventual outcome (Venter, Boshoff, & Maas, 2005). There could be parent-child tensions and there could also be rivalry amongst siblings. Both could cause conflict and tensions (Nicholson, 2008). As per Grote (2003) family and sibling rivalry and inter-generational strife would create tensions within the family. And such tensions will definitely affect the process of induction and its outcome. Apart from that, there can be tensions arising from lack of clarity of roles or on the issues of fairness in compensation and workload etc. (Danes & Olson, 2003). Such tensions also affect the process of family induction and succession in a big way. Thus, it is important that both the inductor and inductee should harmoniously manage the tensions.

## 4. Methodology

The study attempts through a qualitative approach to analyse the dynamics of the succession process, with the specific view to identify the criticality of the three factors identified, viz. namely 'quality of relations', 'inductee's willingness to join the family business' and 'ability to manage tensions harmoniously'. It focuses on succession process in small and medium FMBs i.e. in the SME sector. This is an intensive study using the qualitative research method. Qualitative research is the preferred method when the parameters to be studied are psychological and emotional and thus difficult to quantify. The most common method of carrying out qualitative research is the Case Study method. Data gathering is done through observation and interviews. The interview schedule may be structured, semi-structured or unstructured.

The present study is a Case Study based on close observations of two families, using frequent unstructured interviews, over a period of five years. Arnould and Wallendorf (1994) have suggested that such ethnographic methods of data collection are appropriate for apprehending complex behaviour. The reasons for selecting these two companies were that they were open to periodical interviews over five years and to that extent permitted a longitudinal study. It is a well-known fact that family businesses are concerned about their privacy and are wary of revealing their family information. Both the families were open to

sharing all aspects of their business and life but have requested anonymity. Therefore the names and some of the details have been replaced to retain confidentiality. However the accuracy of all other factual information is retained.

## 5. Details of Case Studies

### 5.1. Family Study 1

Rajeev, now aged 74, a mechanical engineer, started a business of trading in engineering products in Mumbai in 1970. His younger brother Anil, now aged 68, also a mechanical engineer, joined him in the business in 1975 (Figure 1).

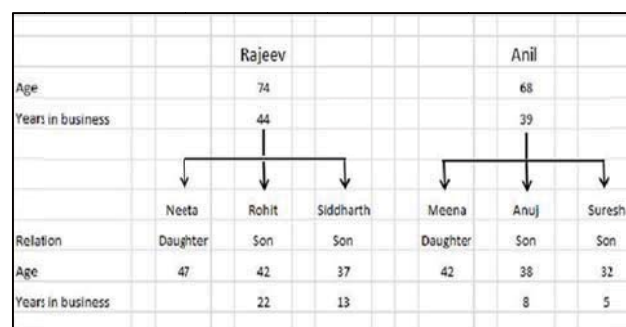


Figure 1: Family Chart

Initially they started with trading in a small way and then, in 1978, identified a supplier to produce the products as per their design, and continued to procure them from him for three years. As their scale increased, in 1981 they set up their own factory. Since both the brothers were engineers, they developed a good grip on the products and gradually the business started growing at an accelerated pace. By 1992 they had a turnover of US\$ 1million.

As can be seen from the family tree both the brothers have three children. Rajeev has one daughter Neeta, now aged 47 who is married and lives in another city with her husband and children. Rajeev also has two sons, the elder one Rohit, now aged 42 and younger on Siddharth, now aged 37. Anil also has one daughter Meena now aged 42, married and living in the same city with her husband and children. He has two sons, the elder one Anuj, now aged 38 and the younger one Suresh now aged 32.

Rajeev was very particular in bringing up his children. He believed in a rigorous and demanding approach. He encouraged his children to do various courses such as photography, public speaking, personality development etc. He used to discuss with them to plan their career. He and both his sons were all very clear that the sons have to join

the family business. The elder son Rohit was not very good at studies. He completed his diploma in engineering. While he was pursuing his studies, Rajeev kept him involved in the factory and business. Once he completed his studies Rajeev planned his working with his Italian supplier at their plant for two months to get exposure to European practices. He deputed him to the factory to study the working and learn the operations.

Rohit joined the business in 1992 and for the next three years Rajeev planned a detailed program to facilitate his learning. Rohit was of mild temperament and whenever he had differences with his father, out of respect for his father he would follow the suggestions of the father. He worked hard and got himself immersed in all the finer details of the business.

Siddharth, Rajeev's second son, had an independent thinking nature and wanted to do things in his own way. He decided to pursue graduation in commerce and worked outside for two years to gain experience. He too was also clear that he would join the family business and joined it in 2001. Rajeev suggested to him to spend three months each in various departments. Siddharth followed it well, worked hard and in a short time developed a good grip on various aspects of the business. Thus Rajeev had carefully groomed his sons for joining the business, helped them to systematically plan their induction and they also in turn followed the plan by putting in hard work; in spite of their differences in temperament and independence.

The younger brother Anil had a different approach. He permitted his sons to do whatever they wanted. He did not plan for their careers as he perceived it as imposing the parents' dream on the children. Both his sons Anuj and Suresh pursued commerce studies and were not keen to join the family business. They felt that the family business was very small and was not professionally run. Both of them wanted to start something of their own. They did not even complete their graduation as according to them it was not worthwhile and was a waste of time. Instead they tried two or three ventures in partnership with some friends. Anil would give them whatever capital they needed and did not ask them about the business nor got involved in guiding them as he believed that both of them were smarter than him and was confident that they would do better. Thus both of them lacked clarity and commitment to build for the success of a venture.

Rajeev and Anil between them had very good equations. They had fixed monthly withdrawal but could also further withdraw any amount from the business as may be required. They never asked each other about the same. Rajeev's elder son Rohit joined the business in 1992 and he did not get himself involved in the accounts of the business. However after Rajeev's second son Siddharth joined the

business in 1988, with his commerce background he got involved in accounts and finance of the business. Siddharth soon realized that his uncle Anil had withdrawn large amounts on two occasions to give capital to his sons Anuj and Suresh for their ventures with their friends. On both the occasions the ventures had gone wrong. Siddharth felt that these ventures were not well thought out and in any case he felt that such matters should have been discussed as after all money was going out from the family business.

Siddharth first brought these matters to the attention of his brother Rohit and together they decided that it should be taken up with the elders, their father Rajeev and uncle Anil. When they called for the meeting and raised the issue, both the elders were silent and were not inclined to take the discussion forward as it would rock the boat. However the cousins continued to lose the money on more occasions and eventually it became a serious matter of misunderstanding even between Rajeev and Anil. Rajeev was always concerned that Anil had not groomed his sons well. Anil on the other hand felt that there is no harm if children make some losses as they will learn the business that way only. Both his sons would try new ventures and come out with reasons why the venture could not succeed, and would continue to project that they were good but the situation turned out unfavorable. That is from locus of control perspective; both were externals that led to blaming circumstances and environment rather than self for failure of businesses.

Eventually there was a split in the family in 2010. Rajeev and his sons took one part of the business and Anil took another part of the business. Both of Anil's sons eventually joined him in the business. Finally in 2016, Rajeev has almost withdrawn from the business. Both his sons are actively pursuing the business with tremendous sincerity and have grown the business manifold. They have reached sales of US\$ 8 million in 2016 with good 19.5 % profitability i.e., net profit margin. They are excited and believe that they are in a great business and plan for a quantum jump in the coming times. Rajeev has been concerned about the success of his sons' business and keeps giving them feedback about their working and they appreciate the same with open minds. Occasionally there are serious disagreements between them but they manage the same and make a virtue out of the same.

Anil continued to carry on his part of the business. His elder son Anuj is in the business for 8 years now and has become more realistic. However he does not have idea about many aspects of the business and Anil has to take care of the same himself. They also have grown the business to US\$ 3 million. However their profitability is 5%. The younger son Suresh joined the business in 2004 but even now he does not take much responsibility. Both the



sons do what they want and are not accountable. They believe that their elders have not done proper business and because of that they are stuck with outdated and non-profitable business. Anil initially had left both the sons to themselves. Now that they are involved in the business, he has to point out their mistakes. When he does that both of them get resentful and say that he is always finding fault with them. There are often arguments on the same with Anil and at the end they avoid talking to each other to the extent possible. Misunderstanding, lack of openness and receptivity on the part of sons creates tension in the family whereby the sons start avoiding Anil. Therefore, a stage has arisen where Anil feels helpless and at times broods on the past to introspect about where things went wrong.

#### 5.1.1. Findings from Family Study 1:

The facts of the case seem to indicate that in case of Rajeev and his sons, they had good understanding between them, the father seems to have invested time and energy in inducting them and finally had good confidence in them. As far as Anil is concerned, the issue is more a case of an indifferent induction approach. However when there are arguments they end up with avoiding to talk to each other. This shows the inability to manage the tensions. The outcome in terms of effects on business, family harmony and self (inductee) are negative.

Both of Rajeev's sons show humbleness in their attitude. Rohit has followed the guidance of his father all along. Siddharth, though of independent nature, has also followed the plan given by his father. They do not seem to have complaining nature. As seen above the outcome in the form of impact on the business as well as on the inductee has been positive. In the case of Anil, however, both the sons have been overconfident. They believed their elders were not conducting the business well and wanted to start something of their own. When they failed in their venture, instead of realizing their mistake, they resorted to excuses and blame game. They complain about the elders' way of doing business. The outcome in terms of impact on the business as well as on them is negative.

In case of Rajeev there is no explicit mention about tensions between the inductor and inductees. There are often serious disagreements but they seem to have the ability to resolve them amicably based on facts and figures, and manage the conflict constructively. Perhaps because of that the perception of the tensions is not strong. As three of them from two generations have distinct personality traits, that does create tensions but they have learnt to manage them. In case of Anil, it is evident that initially there was indifference and eventually there is tension. But he and his sons do not seem to display the ability to manage the

tensions. In the absence of the ability to manage the tensions the impact on the business and family is negative. Thus a stage arises in the family wherein all three of them start undergoing a burn-out phenomenon i.e., tension that starts physically and psychologically having an adverse impact on the person.

Both of Rajeev's sons seem to be aligned to his guidance. They are appreciative of his feedback. Contrarily, Anil's sons resent his feedback. They do not have respect for their elder's way of doing business. It is evident from the above that Rajeev had carefully planned the induction of his sons. Both his sons joined the business out of their choice. They were willing inductees. The outcome in terms of impact on business, family and inductee has been positive. However in case of Anil, he did not plan the induction of his sons. They joined the business in a way, out of compulsion, as they could not succeed in their other ventures. Their forced and circumstantial joining the family business resulted in a negative impact and outcome on the business, family and the inductees

#### 5.2. Family Study 2

Pramod, now aged 55, a commerce graduate started a business of processing polymers in Mumbai - the financial and industrial capital of India - in 1978. His father was a broker in the textile market and had a very small business. Pramod decided to learn the business with his uncle in the polymer industry. He initially started with trading and eventually in 1985, set up his own unit in Silvassa in Gujarat. By 1999 he had a turnover of US\$ 10 million.

Pramod has a son Tarun. Tarun was not good at studies. He also did not take much interest in his father's business. He maintained that his father's business is too small and he will start a new business and make it big. He managed to complete his graduation. He tried to start a venture of his own but did not succeed. Eventually he decided to join the father's business in 1999 at the age of 22. He did not have any idea about polymers. He started attending the office but had no clear responsibilities. He felt that his father was getting too involved in nitty-gritties instead of appointing competent people and delegating the work. When he discussed this point, his father would explain that in this business it is necessary to be practical and concrete with knowledge of details. In that way one will know all aspects of the business as well as gain respect from the employees.

Pramod was not very happy with the attitude of his son of not getting into details. He tried several times to advise Tarun to get more actively involved in the business and take responsibilities. Tarun always had reasons to justify why he could not work effectively and believed that his father's style was wrong and it was because of that the business was still

very small. He believed that given a free hand he would grow the business very fast but Pramod would not give him a free hand. Eventually they had a strained relationship between them. They avoided facing each other and slowly communication between two of them became very minimal.

Over the years, Tarun did get more involved in the business. He started taking more responsibility, the business grew to nearly US\$ 20 million but the profitability had drastically declined. The key people developed by Pramod left the organization as they found Tarun's demands were becoming unreasonable. Tarun did not have much firsthand experience in the business and as such could not come up with any innovation to develop it further. There were some new products launched by Pramod that elongated the survival of the company for a few years. In the meantime the relations between the father and son continued to further deteriorate because of increasing tension. Pramod felt that Tarun was not giving him enough respect and did not appreciate the value of his experience. Tarun felt that his father was old-fashioned and did not want to hand over the controls. Both of them, occasionally did appreciate the contribution of the other, but soon drifted into criticism of the style and approach of each other.

Tarun got married in 2004 and within the next three years wanted to live separately. (In a typical Indian family the son and daughter-in-law generally live along with the parents of the husband) Pramod was very sad with this demand. He believed that this signaled his failure as a father and a separate house would eventually lead to separation in business (a typical Indian family norm). He kept on avoiding the demand on the excuse of not having adequate liquidity. They stayed together but with constant tensions between them. Slowly Pramod had reduced his involvement in the business by just taking care of a few functions and Tarun took over the reins and started running the business. Pramod keeps overseeing the finance and HR aspects of the business which in Tarun's opinion are the worst managed departments and bottlenecks in the company's growth. On the other hand he does not want to take over the responsibilities as he believes that he is overloaded and he will not be able to handle more load.

Tarun feels that it is because of his father's adamant approach that he is not able to grow the business. Often he laments that instead of joining the family business if he had started something on his own; perhaps he would have grown much more in life.

#### 5.2.1. Findings from Family Study 2:

Tarun joined the business at the age of 22. Initially he did not take many responsibilities He felt that his father did not give him a free hand. There was tension between the two

and eventually they avoided facing each other and had minimal communication. That reflects the lack of ability on both the sides to handle and manage conflicts. The father was unhappy at the attitude of the son of not going into the details, which implied that that he did not have confidence in son's abilities.

The son did not take much interest in the business and kept on complaining about his father's style. Despite his father advising him many times to get involved in the details, he did not do that and instead criticized his father for being over involved into the nitty-gritty of the business. It is evident that he was overconfident and did not pay much attention to the details. He did not have much grip on the business. There was a constant tension with his father and they ended up with minimal communication.

It is evident from the above that the outcome in terms of impact on business, family and the life of the inductee turned out to be negative. The business has grown nominally and the profitability has declined. The relations within the family are strained and the son is also not happy with business and laments about his decision to join father's business. In this case the father's advice of getting involved did not mean much to the son and instead he was critical of his father's approach. The son did not seem to have much respect for his father's way of working. Eventually there are serious tensions between them and both are unhappy. That has resulted in the downfall of the business in the hands of next generation.

## 6. Analysis and Interpretation

### 6.1. Analysis

The data gathered about the two families is examined further according to the factors and sub-factors identified for the study, and presented in Table 1.

### 6.2. Interpretation of the Findings

From the above analysis it can be said that the outcome in terms of positive impact on business, family and the inductee depends to a large extent on the quality of relations, willingness of the inductee and the ability of both the inductor and inductee to handle and manage the tensions. All these aspects can be worked upon in a planned manner. Thus from a young age if the inductor inculcates in the inductee the pride about the family business and generates excitement for joining the business, it will eventually help in positive induction. At the same time both inductor and inductee should learn to recognize the tensions likely to



**Table 1:** Analysis of Factors (H = High, A = Average, L = Low or nil)

	Family 1, Branch 1 Rohit & Siddharth	Family 1, Branch 2 Anuj & Suresh	Family 2 Tarun
<b>Quality of relations</b>			
Inductee listening to and valuing the advice of the inductor	H	L	L
Inductee seeking the guidance and support of the inductor	H	L	L
Inductee appreciate of inductor giving frank feedback	H	L	L
Inductee complaining about the conservatism of the inductor	L	H	H
Inductee complaining about the inductor not giving him enough power	L	L	H
Inductee overconfident and complaining	L	H	H
Inductee thinking that the inductor's way of doing business is not appropriate	L	H	H
<b>Inductee's willingness</b>			
Inductee keen to join the business	H	L	L
Inductee taking interest in the business from a very young age	H	L	L
Inductee willing to put in the hard work required in the business	H	L	L
Inductee keen to learn the nitty-gritty of the business	H	L	L
<b>Tensions</b>			
Existence of tensions	L	H	H
Ability and willingness to harmoniously manage the tensions	H	H	L
<b>RESULTS</b>			
Success and expansion of business	H	A	A
Feeling of satisfaction in younger generation	H	L	L

arise in the process of induction and instead of sweeping them under carpet get them trained in developing an ability to manage these tensions effectively. A well-planned approach to induct the next generation in the business results in a new thinking and innovations to further develop it. However this requires a well thought out approach and process coupled with recognizing the importance of maturity and experience on one hand of earlier generation and power of ideas resulting in innovation to grow the business of the next generation.

## 7. Conclusion

This qualitative study through observations and discussions on continuity concerns of Indian family businesses with reference to eastern social and cultural context and also the developing economy context with a specific reference to small and medium enterprises validates some of the drivers of effective succession identified so far in the literature. However it sharply identifies the variables that can be more relevant and directly affect the outcome in terms of positive impact on the business, family and the inductee. The study also focuses on the need for long term planning to systematically induct the next generation into the business, which requires specific processes and systems coupled with deeper thinking on the part of the earlier generation.

This study has limitations of sample size and it being based on unstructured interviews. To that extent the study is also vulnerable to the effects of variability in the perceptions and subjectivity. Such effects could artificially inflate the relationships among variables. The validation of the identified factors and their impact with a larger sample and in other developing economies can guide further research in the area of continuity of family businesses.

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# The Impact of Property Management Services on Tenants' Satisfaction with Industrial Buildings

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Received: March 31, 2017 Revised: May 31, 2017 Accepted: August 5, 2017

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## Abstract

In the current competitive marketplace of real estate business, tenant satisfaction measurement is one of the important indicators to monitor competitiveness in industrial property development. It has become an industry standard to measure tenant satisfaction, commonly called customer satisfaction. Customer satisfaction has become the widely used metric to manage customer loyalty (Keiningham, Gupta, Aksoy, & Buoye, 2014). The aim of this research is to determine the impact of property management services on tenants' satisfaction with the three identified variables i.e. facility management, perceived quality and lease management. Structural equation modeling (SEM) is applied to build constructs and test the hypotheses with the collected survey samples. Of the three variables, facility management is the most influential factor that leads to tenant satisfaction with industrial buildings. Next, perceived quality is another important factor that contributes to tenants' pleasure. Compared with these two, lease management fares worse, having the least extensive effect on tenant satisfaction, and could be disregarded. The ultimate impact of tenant satisfaction is about tenant retention and recommendation. The overall findings of this research will potentially help real estate developers to develop a better property management system, leasing program and tenant retention strategy.

**Keywords:** Tenant, Landlord, Customer Satisfaction, Industrial Building, Property Management, Southeast Asia.

**JEL Classification Code:** D02, D10, L80, L85, O18.

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## 1. Introduction

Over the years, tenants have become more demanding in their perceived expectation of leased space. The importance of customer relations to businesses' success is agreed by corporate management, marketing theorists and practitioners (Kennedy & Schneider, 2000). The value contributions of properties can be optimized when property management professionals take responsibility for continuously providing

appropriate facility solutions to business challenges (Then, 2005). Property management also involves tracking information on tenant profiles, occupancy, operating and capital expenses, and revenues (Kaganova & Nayyar-Stone, 2000). Successful property management depends on treating tenants as valuable customers. Determining the preferences of customers allows companies to provide customized products and superior services (Kennedy & Schneider, 2000). We need to capture the essence of customer satisfaction in greater depth to understand the long-term development of the business relationship (Tikkanen & Alajoutsijarvi, 2002).

The question is what the important elements of property management services that tenants are looking for to be satisfied are? Wants and needs theory tells us that landlords should ask tenants the right questions to determine which services they need and can afford (Otto, 1998). Many landlords carry out customer satisfaction surveys to understand the sentiments of their tenants. Tenant surveys have proven to be a valuable tool for tenant retention programs (Birkeland & Beltini, 1995). Landlords should identify the key services valued by the tenants and use the

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benchmarking results to set goals for improvement opportunities (Muhleback, 1998). Many research studies have been conducted on customer satisfaction-related topics, which mainly focus on one single sector, either facility management or service quality. There is also customer satisfaction research papers related to the consumer products industry. However, the existing research papers have provided limited information about the model of property management services that could lead to tenant satisfaction and renewal.

This research particularly involves the industrial tenants in the manufacturing industry of high-technology products, test laboratories, research and development, data centers, central distribution, e-business, engineering, construction, etc. The empirical study and research model illustrate the essential concepts of tenant satisfaction. The model consolidates the property management services into one model rather than single piecemeal sectors. We also included the latest environmental and sustainability elements that many research papers have discussed separately as individual topics. The research aims to explore the insights of tenants and tries to understand the importance of the property management services that will affect customer satisfaction. The study will be useful for landlords in setting tenant expectations, identifying the key drivers of satisfaction, prioritizing improvement actions and creating a customer-centric culture. Three sectors are identified in this research: 1) Facility Management, 2) Lease management and 3) Perceived quality.

## 2. Research Background

A comprehensive survey of the literature was carried out to review and analyze the relevant completed research in detail. These research papers are related to property management, facility management, customer satisfaction, lease management, service marketing, service quality and research modeling from scholarly journals and other databases. The theoretical development of tenant satisfaction has been conducted under the study model of customer satisfaction and service quality. This literature review exercise examines the major determinants and the impact on the overall property management industry from the holistic perspective of all the key dimensions. It also studies the degree of causality of the variables and the constructs that have not been examined in the existing research.

Some of the preliminary results of the literature review findings are compiled in Table 1. The literature review identifies the dependent variable as 'the impact of property management services on tenant satisfaction with industry buildings'. A few independent variables identified as:

1) facility management services through the quality of the maintenance and condition of the building, the amenities provided in the surrounding areas of the building and the sustainable elements of the building itself.

2) lease management services by providing green leases, rent resolutions, relocation assistance and renewal packages despite past unpleasant experiences.

3) perceived quality in the form of the overall service quality from the landlord, communication with the tenants, capability and knowledge of the landlord's representative and empowerment of the landlord's representative (see Table 1).

**Table 1.** Comparison of empirical studies on the impact of property management services on tenant satisfaction

Details of literature	Inference on the impact of property management services on tenant satisfaction	Importance of the parameters to maintaining tenant satisfaction	Detailed discussion of each parameter	Expectations from tenants of the property management services
Implementing quality property management – the case of Singapore (Chin & Lam, 1999)	Only examined the different types of quality concepts and evaluated the awareness and attitudes towards quality issues	Service quality, relevant knowledge and skills; systems must ensure effective control and smooth operations; environment must be conducive; effective communications	Discussed how to improve via training and some of the quality tools	Provided examples of some of the successful firms concerning service quality as benchmarking
Quality services success: property management development to empowerment (Yap, 2000)	Little attention paid to tenant satisfaction but highlighted that the empowerment could enhance the commitment to service quality improvement	Empowerment, continuous improvement, customer value and customer focus	Strategy of empowerment, the new role, control and training to achieve empowerment	Not analysed



Details of literature	Inference on the impact of property management services on tenant satisfaction	Importance of the parameters to maintaining tenant satisfaction	Detailed discussion of each parameter	Expectations from tenants of the property management services
A proactive property management model that integrates real estate provision and facilities services management (Then, 2005)	Focused on the internal practice of property asset management in an organization for management to allocate resources to the various functional divisions	Strategic facilities planning, strategic asset management, asset maintenance management, facility service management	The research focused on how a landlord can lead to corporate success.	Not analysed
Managing 'keep' factors of office tenants to raise satisfaction and loyalty (Appel-Meulenbroek, 2006)	Study on the effect of office (location and building) 'keep', push and pull factors on satisfaction and loyalty of tenants	Appearance, health and safety, quality of life, extension possibilities, quality demand, flexibility, communication, logistics, efficiency, maintenance, rental contract	Each of the parameters was studied with the degree of correlation with the keep, push and pull factors.	Push/pull factors all seem to be building factors; important keep factors seem to belong both to the building and to the surroundings.
Customer relationship quality in landlord-tenant relationship (Rasila, 2009)	The landlords would want to differentiate themselves from the competitors; major impact on how the entire company is perceived.	Commitment, ethical profile, sharing of information, communication, conflict, the balance of power and personal attributes	The paper introduced a framework of relationship quality attributes and applied these to the case companies.	The framework of 11 relationship quality attributes proved to be problematic in practice. Some of the attributes overlap with each other.
Brand trust: elements and influences on industrial landlord/ tenant relationships (Sullivan, 2012)	The physical attributes of the property are more influential on tenant retentions. Brand trust has some influences on the quality of the relationship, which is partially determined by the level of satisfaction. However, they are not as important as the tangible aspects.	Accessibility, benevolence, communication, competence, conflict resolution techniques, cooperation, coordination, credibility, equality, flexibility, professionalism	Important parameters were assessed through interviews.	Only mentioned the location, building and lease term in brief for renewal but not in detail.
This research paper	Focuses on the detailed study of the core variables. Perceived quality has a significant impact on facility management, lease management and overall satisfaction, which are the new findings.	Tenants have demonstrated a strong inclination for two out of three core variables, which the facility management and the perceived quality of the property management services on tenant satisfaction.	Extensive and detailed discussion of each of the three core variables that would influence property management services' effect on tenant satisfaction.	Three existing core factors were identified and the inference is drawn using an extensive quantitative survey using structural equation modeling (SEM).

### 3. Research Methodology

After identifying the important variables, the empirical study was tested using a survey for data collection for the research model. The quantitative and qualitative method employed is discussed in the section on data collection. Based on the results of the literature review, the initial survey questionnaire was crafted with each of the identified sub-variables. The first pilot test was administered to 20 people from different industries, including company directors, human resource managers, marketing experts, marketing research consultant, tenants and landlords. After receiving

constructive feedback from the pretest, the survey questionnaire was then redesigned with an introduction and more footnotes to explain the intent of the survey and questions. One important question was featured and added at the beginning of the survey to filter out the non-targeted population in order to ensure the quality of the survey results. Several items were changed and sentences were rephrased to simplify the understanding.

The finalized survey questionnaire was then disseminated to 30 people as the second pilot test. The purpose of the second pretest was to use the collected primary data to check the research model via SmartPLS software, which

uses the partial least square technique (PLS). The final survey was conducted after the pretest results indicated the relations of each construct. PLS is discussed in the section on data analysis.

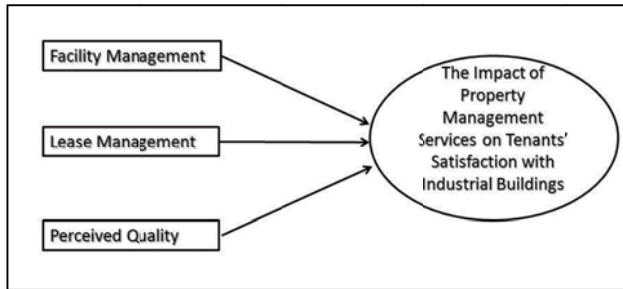


Figure 1. Research framework

## 4. Research Framework and Hypotheses

The research framework was built for this research as shown in Figure 1. The underlying approach to a successful property management service must be tenant-centric; tenant satisfaction is one of the most imperative gauges to measure the level of the service being delivered from the tenants' perspective (Lam, 2007). Customer satisfaction research began in the early 1970s. Much of the research focused more on sales and marketing, fast manufacturing consumer goods (FMCGs), service quality in hospitality, etc.; comprehensive research on property management in the real estate industry is scarce. In consumer research, customer satisfaction has always been defined as 'the degree to which a consumer's pre-purchase expectations are fulfilled or surpassed by the product' (Tikkanen & Alajoutsijarvi, 2002).

The customer satisfaction philosophy then slowly evolved into the service industry of property management. A study found that satisfaction and price are almost always inversely related (Keiningham et al., 2014). Therefore, in this research, we did not impose the price or rent as one of the sub-variables. The rent depends on the market condition and the property location. Olayonwa, Iman and Ismail (2012) explained that the rate of office rent is a function of office quality; a higher class of office quality should have a premium compared with the average market rent for a lower-quality class. Business efficiency and accountability to tenants are the important drivers to foster the continuity of the tenancies and attract new tenants. The impact of satisfying the tenants would be low tenant turnover, full occupancy and few complaints (Gubbay, 1999). Building owners have to be diligent in maintaining full occupancy for the value growth by competitive advantage (Sabolovic, 2008).

The practice of property management has gradually matured in recent years with an emphasis on processes and management. The shifts have recently been towards resource integration to provide a supportive working environment in which the issues of people, process and property are elements of the same problem, seeking a common platform for resolution (Then, 2005). We also translated and grouped these issues into the industry terms of facility management, lease management and perceived quality.

This paper contends that the property management model encompasses the integration of good facility management, lease management and service quality as the custodian to maintain the tenant satisfaction and the impact. The focus of the research is on providing a business perspective on the role of the landlord in facilitating the fulfillment of the business plan.

### 4.1. Facility Management

A major role of facility management covers the reliability, usability and safety of the property managed. Lai (2012) articulated that the main aspects of facility management services include general management (attitude of staff, ability to handle emergency situations), security (initiative of providing assistance, security control and patrol), cleaning (cleanliness of areas like lobbies, washrooms and staircases), repair and maintenance (electrical supply system, flushing water system, elevator system, air-conditioning system) and landscape and leisure (aesthetics and tidiness of plants, environmental protection measures and leisure amenities).

On the other hand, another interpretation as building maintenance management classifies the maintenance aspects (with the performance measurement) into i) functional (management service delivery – reliability, responsiveness, etc.), ii) Technical (maintenance services – cleaning, landscaping, lighting, air-conditioning, lifts, sanitation, washing facilities, etc.) and iii) image (building image – internal and external) (Myeda, Kamaruzzaman, & Pitt, 2011). For example, one of the studies (Lam, 2007) pointed out that nearly a quarter of the respondents were dissatisfied with the temperature in the office and they were disappointed with the lack of control of the temperature in the office. Another study (Oladapo, 2006) highlighted that tenants had a high level of maintenance awareness and responsibility but their satisfaction with the condition of maintenance was just average.

Building owners nowadays strive for cost leadership to make the buy decision by outsourcing the facility management. However, the outsourcing relationships with the service providers face classic principal-agent problems;

the agency theory claims that agents always act opportunistically (Freybote & Gibler, 2011). The trend towards outsourcing enacted duty to the landlord to review the policy, which will ultimately affect the service receivers, who are the tenants (Then, 2005). The way in which facility management is delivered will affect the tenants' business and their willingness to pay and to stay. Customer perceived quality means success for most businesses and good quality increases satisfaction (Rasila & Gersberg, 2007). Otto (1998) suggested that a building owner may include amenities like a child care centre, fitness centre, eateries and joint conference rooms as well as services like a valet service and a free shuttle bus designed to help tenants save money and to impress them. However, the study by Gower, Harris and Cooper, (1996) found that some amenities or facilities for industrial property buildings within science parks in the UK are quite distinctly extraneous, as reported by the tenants.

Since energy consumption is a national concern for most countries, understanding facility energy consumption becomes a critical component from a life cycle decision-making perspective. Facility managers are encouraged to gain a better understanding of the factors affecting energy consumption in facilities, which will lead them to develop energy initiatives for a better overall asset management strategy (Griffina, Thal, & Leach, 2014). The industry strongly believes that green and sustainable building implementation is environment-friendly and can improve the social values to the consumers (Tam, Hao, & Zeng, 2012). There is also a claim that the construction of green buildings is one of the critical efforts to reduce the environmental impacts of the built environment (Cidell, 2009). Although green building features are understood to be more expensive than those of conventional buildings, the empirical results show that green buildings with a green certificate, improved yield and net rental income result in an average increase in the property value of 9.0% (Vimpari & Junnila, 2014). Landlords are also claimed to be the essential contributors to governmental environmental policies by improving the energy performance of their property portfolios (Smid & Nieboer, 2008). A recent signal indicates that both building tenants and landlords are starting to realize the potential of facility management, which can add value to the environmental management (Nousiainen & Junnila, 2008).

In general, a service level below expectation provided by the building facility management is the reason behind dissatisfaction and forces tenants to move out of the building to a better place (Tsang, 2009). From the above discussion, the hypothesis is as follows:

**Hypothesis 1:** Facility management resulting from good service quality (like cleaning, maintenance, landscape, etc.), sustainable environment management with green building or office provision and the surrounding amenities will have a positive impact on tenant satisfaction in industrial buildings.

## 4.2. Lease Management

Lease management usually refers to the administration work of handling rents, legal requirements, lease renewal options, information management, reporting and other lease-related matters. In the current competitive market, tenants are seeking more flexible occupational terms in the lease (Ashuria, 2010). Green leasing is the latest trend in the market and is highly encouraged nowadays. A green lease is interpreted as a lease agreement between landlord and tenant that imposes onuses on both agreed parties to minimize the adverse environmental impact in a few areas like energy, water and waste management. A sustainable and friendly environment is able to create mutual benefits for the business, people and overall environment (Armitage, Murugan, & Kato, 2011).

Whitson (2006) believed that few people ever negotiate a green lease but a green lease inspires landlords to compete for tenants by designing, building and managing green buildings without compromising the service and comfort level while optimizing the initial investment. There are perceived benefits in that a green building is able to improve public relations, revenue and staff retention, but research (Sayce, Sundlberg, Parnell, & Cowling, 2009) has shown that there is no strong support among tenants for green leases. Besides that, there are findings suggesting that a green workplace only offers psychological benefits to occupiers, who feel proud, rather than physical improvements to health and productivity (Kato, Too, & Rask, 2009).

While the flexibility and choice in leasing have improved in recent years, small business tenants' awareness of leasing issues remains weak. The major difference between small business leases and those for medium/large-sized companies is that small business tenants have shorter leases, fewer rent reviews and earlier terminations (Crosby, Hughesa, & Murdoch, 2006). Hence, offering flexibility in rent resolutions, assistance in logistics and renewal packages is crucial for tenants. Ashuria (2010) highlighted that there is always uncertainty in the corporate tenant business, like mergers, acquisitions, downsizing, expansion, restructuring and decentralizing. Constant change is expected in the business world and a thoughtful landlord should provide flexibility in the lease terms to help their tenants manage change. Repackaging the renewal contract,

restructuring the rents and meeting the logistic needs of the tenants at the critical moment are believed to be the kindest gestures to the tenants.

It is believed that the economic crisis will have a great impact on workspace planning (Ashuria, 2010). It was suggested by Muhlebach (2009) that during crisis landlords should try to work with tenants who cannot pay the rent before replacing them, as it will be hard to fill the occupancy during an economic downturn. A few non-direct monetary solutions are proposed to reduce tenants' square footage or to relocate to a smaller space or other buildings (Muhlebach, 2009). Tenants are willing to pay rental premiums with shorter tenancy because the cost of exit falls as the lease length shortens (McCann, 2000). However, this belief is only applicable to the group of tenants who have not invested heavily in the machinery and equipment set up in the building or small business tenants as mentioned. Christersson and Rothe (2012) found that relocation has various impacts that involve not only relocation costs, disruption, different lease features, changes in the environmental footprint and employee reactions, but also changes in the employee satisfaction, productivity, organization dynamics, corporate image and employee turnover. Hence, keeping tenants satisfied with the building and lease term is vital; they will seldom move to other buildings because of the few benefits as the relevant costs for moving, disruption and trouble are relatively high (Romano, 1992). Lease management could be improved by adopting the 'best practice' in the leasing and management of industrial buildings (Jayne, Mackmin, & Syms, 2007).

From the above discussion, the hypothesis is as follows:

**Hypothesis 2:** Lease management resulting from green leasing, which provides rent resolution and moving assistance and offers a good renewal package to compensate for a past unpleasant experience, will have a positive impact on tenant satisfaction in industrial buildings.

#### 4.3. Perceived Quality

A fundamental principle of the service concept is the notion of satisfying the customers' needs; it is believed that satisfied customers will eventually boost the firm's bottom line in multiple ways (Myeda et al., 2011). Naudé and Buttle (2000) defined relationship quality as one of the forms of quality encountered by customers in which high relational quality contributes to the customers' perceived quality and thus enhances the long-term relationship. The primary characteristics of any successful partnership embrace commitment, coordination, trust and communication. Singapore Airlines' (SIA) standard of service was

benchmarked to aim for improvement in customer service with other industries, which is one of the two major areas that was identified (Chin & Lam, 1999) and subsequently adopted as the benchmarks for service quality.

Service perceptions are basically customers' judgements that relate to the superiority of a service (Malik, 2012). A common understanding is that landlords are honest and have goodwill towards those whom they classify as important; continuing to share information and communication patterns will also increase the quality of the relationship (Rasila, 2009). A service is not an object but a phenomenon. It is difficult to evaluate the quality of services because of the human involvement. Achieving high tenant satisfaction on the ground is highly individual and depends on personnel who have the good attributes of SERVQUAL regarding tangibility, reliability, responsiveness, assurance and empathy (Kim et al., 2001; Spencer & Hinks, 2007). Hoots (2005) introduced 3R gaps analysis into customer relation management, which are the resource gap, response gap and respect gaps, which could be applied for service improvement.

In order to increase organizational effectiveness to gain a competitive advantage, landlords are advised to embrace empowerment, which will motivate an encouraging level of service quality. Empowerment also enhances management control and has a positive effect on employee productivity and performance (Gerais & Terziovski, 2003). Total quality management (TQM) calls for top management commitment by involving employees in problem solving, decision making and business operation, which requires employee empowerment for quality improvement (Yap, 2000). In addition, knowledge and competency from the landlord's or service provider's representative are crucial in gaining customers' trust. Proper handling of sensitive information, providing superior value, reliable communication and a personal relationship are able to lead to a more enduring relationship (Freybote & Gibler, 2011).

Tenants welcome people who pay careful attention to details, have a more creative approach to avoid inconvenience and are willing to accommodate their changing needs. Tenants also expect their landlord's representative to focus on the customer, have a good response time, make visitations and have good technical and financial backgrounds (Bergsman, 1996). However, due to cost competitiveness, some landlords start to fall into the outsourcing rut of engaging new entrants to the property management service provider, who are not equipped with the necessary experience and resources to offer a professional service (Chin & Lam, 1999). Lai (2012) articulated that the main aspects of facility management services include general management (attitude of staff,

professional knowledge, efficiency in handling complaints, communication and responses to requests).

Gordon and Levesque (2000) suggested that both the perceived value and the service quality dimension should be incorporated into the customer satisfaction model. Landlords desire to satisfy their customers and gain market share by delivering tangible and intangible experiences to their customers. The product and service received reflect the value provided. Good services will literally attain favourable word of mouth to attract potential customers via recommendations. In the long term, landlords will also reap the benefits of lower marketing costs with a good service reputation (Birksa & Southanb, 2007). The outcomes of increased satisfaction are positive reviews generated, growth in new business (bringing in new customers), a growing market share and high renewal rates (Myeda et al., 2011). From the above discussion, the hypotheses are as follows:

**Hypothesis 3:** Perceived quality resulting from service quality, empowerment, knowledge and communication via visitations will have a positive impact on tenant satisfaction in industrial buildings.

**Hypothesis 4:** Perceived quality resulting from service quality, empowerment, knowledge and communication via visitations will have a positive impact on the service quality of facility management.

**Hypothesis 5:** Perceived quality resulting from service quality, empowerment, knowledge and communication via visitations will have a positive impact on the service quality of lease management.

**Hypothesis 6:** Satisfaction will have a positive effect on the overall impact, leading to recommendations and renewals of lease contracts.

#### 4.4. Data Collection

A survey was carried out to collect data. The survey began by stating its objective in order to explain the purpose of the research. A question was asked after this to determine whether the respondent's company has its own building or rents a business space. This question was a screening process to filter out the non-targeted population and to ensure the quality of the survey results. If the respondent's company had its own building, the subsequent page led to the end of the survey with a 'thank you' message. The contents of the survey questionnaire were incorporated into questions on the three core variables identified from the survey of the literature. The survey also posed one non-compulsory open-ended question to gain

qualitative inputs. A summary of the qualitative information is discussed in Section 5.6. The design made the rest of questions mandatory to prevent incomplete responses.

The survey questionnaire framework was designed in two sections. Section one aimed to collect the demographics of the respondents, the level of influence in the leasing issue, their position and the company information, like the business industry, company size and registered country. Section two revealed the insights of tenants into property management services to achieve satisfaction with industrial buildings. For every latent variable, three to four questions were developed to serve as indicators. A five-point Likert scale was applied with one as 'strongly disagree' and five as 'strongly agree'. The entire survey exercise was carried out through an online survey using Google Docs as the platform.

A few associations in different regions were contacted to raise awareness of this survey for the research. The final questionnaire was then disseminated to about 1500 participants located in various regions from the members of the Singapore Business Federation (SBF), Supply Chain Asia (SCA), Singapore Manufacturing Federation (SMF), Economy Development Board Singapore (EDB), SME Corporation Malaysia, SME Association Australia, SEAAANZ Australia, UEAPME Europe and MSME News Network. At the end of the survey, 362 samples were collected, which is about a 24% response rate. Out of these, 247 samples, 68%, were responses from tenants. After a review and check, 246 samples were usable. The following Table 2 summarizes the profiles of the respondents (see Table 2).

**Table 2.** Demographic characteristics of the respondents

Survey participants (n = 247)		
<b>Role in office leasing</b>		
Sole decision maker	11	5%
Key influencer	67	27%
No role	169	68%
<b>Position in the company</b>		
Senior management	70	28%
Middle management	109	44%
Junior management	68	28%
<b>Type of company</b>		
MNC – multinational corporation	147	59%
SME – small or medium-sized enterprise	93	38%
Government body	7	3%
<b>Size of Company</b>		
< 50 employees	70	28%
50 to 199 employees	51	21%
200 to 499 employees	40	16%
500 to 999 employees	38	15%
>1000 employees	48	20%



Industry type		
Chemicals	5	2%
Electronic products	10	4%
Engineering and construction	100	41%
Financial	32	13%
Food and beverage	3	1%
Health care and medical products	10	4%
Information technology	20	8%
Logistic centre	7	3%
Machinery and equipment	6	2%
Others	54	22%
Company registered country		
Australia and Singapore	85	34%
Other Asia Pacific countries	48	20%
Europe and UK	44	18%
Americas and USA	70	28%

## 5. Data Analysis and Results

Structural equation modelling (SEM) is an instrument to test and estimate the causal relationship among latent constructs. SEM applies the multivariate data analysis method, which is widely used in marketing research (Hennig-Thurau, Henning, & Sattler, 2007) due to its capability of testing the linear and additive causal model (Haenlein & Kaplan, 2004). The PLS (partial least square) technique was applied to validate and test the hypotheses using the SmartPLS software (Ringle, Wende, & Will, 2005). The measurement of the outer model stipulates the link between the constructs and the indicators. PLS is suitable for SEM in research projects, particularly when the data distribution is skewed with limited participants (Wong, 2011). The first task is to assess the quality of the measures using the outer model (measurement model) and then to test the hypotheses with the inner model (structural model). The bootstrapping algorithm is then applied to test the significance of the structural paths by generating t-values.

### 5.1. Reliability Validation

Cronbach's alpha and composite reliability scores are the measurement utilized to evaluate the internal consistency and reliability in research. Internal consistency is established when the Cronbach's alpha scores are higher than the recommended value of 0.6 (Hair et al., 2012), in the

acceptable range of 0.5 to 0.8 (Salvucci, Walter, Conley, Fink, & Saba, 1997; Tan, 2009). There are also suggestions in the literature to use composite reliability (Bagozzi & Yi, 1988) as a replacement for Cronbach's alpha. The results in Table 3 show that the Cronbach's alpha values are all greater than 0.6 and the values of the composite reliability scores are close to 0.8 and above. Therefore, the model exhibits high levels of internal consistency in all four latent variables and is demonstrated to be reliable (see Table 3).

Table 3. Reliability validation summary

Overview	AVE	Composite reliability	Cronbach's alpha	R square	LV index variables
Facility management	0.556	0.790	0.601	0.300	4.013
Impact of satisfaction	0.870	0.930	0.851	0.406	3.951
Lease management	0.505	0.798	0.661	0.231	3.717
Perceived quality	0.520	0.812	0.691	0.000	3.995
Tenant satisfaction	1.000	1.000	1.000	0.266	3.972

### 5.2. Convergent Validity Analysis

To check the convergent validity, each latent variable's average variance extracted (AVE) was evaluated. Convergent validity can be interpreted as the degree to which the scores of a measure are related to the scores collected from a similar or different measure. It can also be used to test the construct validity (Fornell & Larcker, 1981; Straub, Boudreau, & Gefen, 2004). In testing the convergent validity, each item's AVE should be 0.50 or higher (Dillion & Goldstein, 1984). Chin, Marcolin and Newsted, (2003) suggested that the loading for each item should be higher than 0.70.

It can be seen in Table 4 that all of the indicators have individual indicator reliability values that are much larger than the minimum acceptable level of 0.4 and close to the preferred level of 0.7. Table 4 shows that all of the AVE values are above the acceptable threshold of 0.5, so convergent validity is confirmed (see Table 4).

Table 5 shows the item-to-construct correlation versus the correlations with other constructs. The results show that the indicators fit into the highlighted constructs only and there is no overlapping with other constructs (see Table 5).

**Table 4:** Reflective outer model results' summary

Construct	Item definition	Loadings (indicator reliability)	AVE	Composite reliability	Cronbach's alpha	R square
<b>Facility management</b>	1. Prefer a sustainable building for a green environment	0.749	0.556	0.790	0.601	0.300
	2. Consider facility management as the most important factor for renewal	0.770				
	3. Willing to pay higher rent for more amenities	0.716				
<b>Impact of satisfaction</b>	14. Willingness to renew the lease and continue to stay	0.937	0.870	0.930	0.851	0.406
	15. Recommend the landlord to others	0.928				
<b>Lease management</b>	4. Willing to pay higher rent for a green lease	0.684	0.505	0.798	0.661	0.231
	5. Expect the landlord to provide rent resolution	0.740				
	6. Willing to accept a good renewal package to compensate for a past unpleasant experience	0.506				
	7. Expect relocation assistance to move into the landlord's building	0.865				
<b>Perceived quality</b>	8. Consider service quality as the most important factor for renewal	0.713	0.520	0.812	0.691	0.000
	9. Prefer to deal with empowered staff	0.757				
	10. Believe staff with in-depth knowledge are more efficient	0.762				
	11. Expect landlord to make visitations	0.646				
<b>Tenant satisfaction</b>	13. Satisfied with a landlord who provides good property management services	1.000	1.000	1.000	1.000	0.266

**Table 5:** Comparison between item-to-construct correlation and correlations with other constructs

Construct	Item definition	Facility management	Impact of satisfaction	Lease management	Perceived quality	Tenant satisfaction
<b>Facility management</b>	Prefer a sustainable building for a green environment	<b>0.749</b>	0.360	0.401	0.387	0.360
	Consider facility management as the most important factor for renewal	<b>0.772</b>	0.314	0.318	0.428	0.353
	Willing to pay higher rent for more amenities	<b>0.716</b>	0.323	0.375	0.410	0.322
<b>Impact of satisfaction</b>	Willingness to renew the lease and continue to stay	0.431	<b>0.937</b>	0.391	0.450	0.613
	Recommend the landlord to others	0.404	<b>0.928</b>	0.420	0.439	0.575
<b>Lease management</b>	Willing to pay higher rent for a green lease	0.510	0.344	<b>0.684</b>	0.307	0.243
	Expect the landlord to provide rent resolution	0.327	0.316	<b>0.740</b>	0.374	0.276
	Willing to accept a good renewal package to compensate for a past unpleasant experience	0.085	0.170	<b>0.506</b>	0.234	0.155
	Expect relocation assistance to move into the landlord's building	0.407	0.371	<b>0.865</b>	0.420	0.297
<b>Perceived quality</b>	Consider service quality as the most important factor for renewal	0.494	0.368	0.324	<b>0.713</b>	0.360
	Prefer to deal with empowered staff	0.388	0.393	0.364	<b>0.757</b>	0.299
	Believe staff with in-depth knowledge are more efficient	0.371	0.385	0.375	<b>0.762</b>	0.271
	Expect the landlord to make visitations	0.304	0.212	0.324	<b>0.646</b>	0.307
<b>Tenant satisfaction</b>	Satisfied with a landlord who provides good property management services	0.463	0.638	0.350	0.431	<b>1.000</b>

**Table 6.** Discriminant validity analysis summary

LV construct	Facility management	Impact of satisfaction	Lease management	Perceived quality	Tenant satisfaction
Facility management	<b>0.746</b>				
Impact of satisfaction	0.448	<b>0.933</b>			
Lease management	0.488	0.434	<b>0.711</b>		
Perceived quality	0.548	0.477	0.480	<b>0.721</b>	
Tenant satisfaction	0.463	0.638	0.350	0.431	<b>1.000*</b>

Note: \* denotes the single-item construct.

**Table 7.** Summary of hypotheses testing results

Hyp no.	Hypothesis description	Path coefficient (b)	T-statistics (T-value)	Significance (one-tailed)	Supported (Y/N)
H1	Facility management -> tenant satisfaction	0.291	3.928	$p < 0.01$	Yes
H2	Lease management -> tenant satisfaction	0.101	1.3244	not supported	No
H3	Perceived quality -> tenant satisfaction	0.224	2.8021	$p < 0.01$	Yes
H4	Perceived quality -> facility management	0.548	9.9246	$p < 0.01$	Yes
H5	Perceived quality -> lease management	0.480	8.0554	$p < 0.01$	Yes
H6	Tenant satisfaction -> impact of satisfaction	0.638	12.5797	$p < 0.01$	Yes

Another step in examining the validity of a construct is to measure the discriminant validity (Gefen & Straub, 2005). Discriminant validity is established when each measurement item exhibits weak correlation with all the other constructs except the one with which it is associated. The square root of the AVE in each latent variable can be used to establish discriminant validity, if this value is larger than the other correlation values among the latent variables (Fornell & Larcker, 1981).

Table 6 shows the square root of the AVE in bold on the diagonal of the table. For example, the AVE value of facility management is 0.556. Its square root becomes 0.746. The number 0.746 is found to be higher than the correlation values in the vertical column for facility management (which are 0.448, 0.488 and 0.548). The same procedures were applied to the other constructs as shown in Table 6. The test suggests that the discriminant validity is satisfactory for the measurement model (see Table 6).

### 5.3. Structural Model Analysis

The model was then put to another test by running the bootstrapping algorithm. Once the bootstrapping procedure (Manski, 1996; Mooney & Duval, 1993) had been completed with the 246 samples, the path coefficients were then examined for the structural model. The software generates T-statistics to check the significance level of the inner and outer models. A large number of subsamples are taken from the original sample to model the unknown population (Hesterberg, Moore, Monaghan, Clipson, & Epstein, 2005). The bootstrap approximates T-values for each of the

hypotheses and the values are tabulated in Table 7. Cowles and Davis (1982) suggested a 5% significance level ( $p < 0.05$ ) to be used as a minimum statistical decision criterion and the results mostly achieved the 1% significance level ( $p < 0.01$ ) (see Table 7).

Of the six hypotheses, five are supported. Hypothesis H1 is supported because the path from facility management to tenant satisfaction is significant ( $b = 0.291$ ,  $p < 0.01$ ). This is due to the fact that tenant satisfaction can be achieved if the facility management is performed properly to the extent required by the tenants.

Hypothesis H2 ( $b=0.101$ ,  $p>0.1$ ) is not supported because many of the tenants are not willing to pay a premium for a green lease. This substantiates the research by Sayce et al. (2009), which found that the new form of contract and its true benefits may not be fully understood by the tenants and there is no strong support among tenants for green leases. On top of that, not many tenants agree that a good renewal package will be able to convince them to stay if they have had a bad experience with the landlord.

Hypothesis H3 ( $b=0.224$ ,  $p<0.01$ ) is supported as tenants see perceived quality as one of the important elements of property management to achieve their expectation. The tenants also validated Hypothesis H4 ( $b = 0.548$ ,  $p < 0.01$ ), which supports the expectation of high quality in a facility management service being greatly dependent on the perceived quality being delivered.

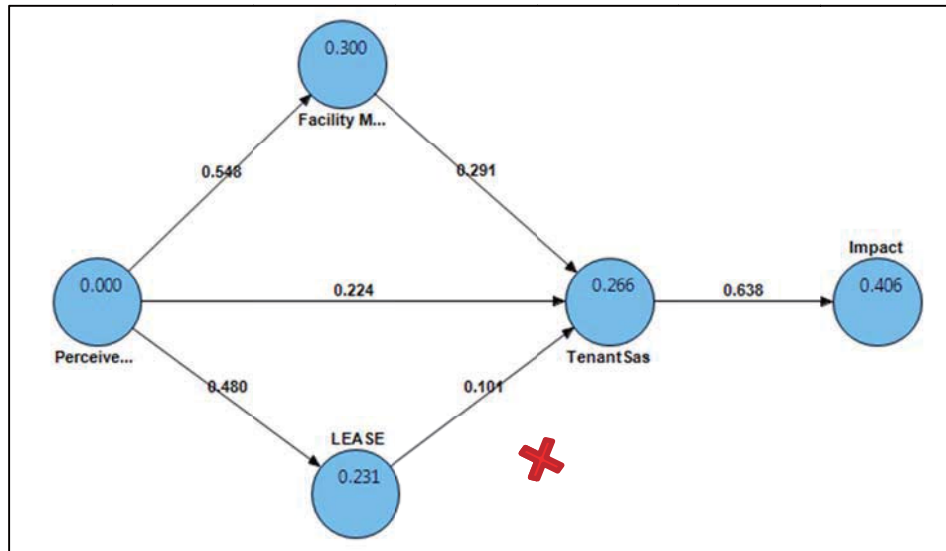
Hypothesis H5 ( $b = 0.480$ ,  $p < 0.01$ ) is supported because, similarly, the tenants think that perceived quality is the driver behind boosting the entire service level of lease

administration and stimulating flexibility and creativity in lease management from the landlord.

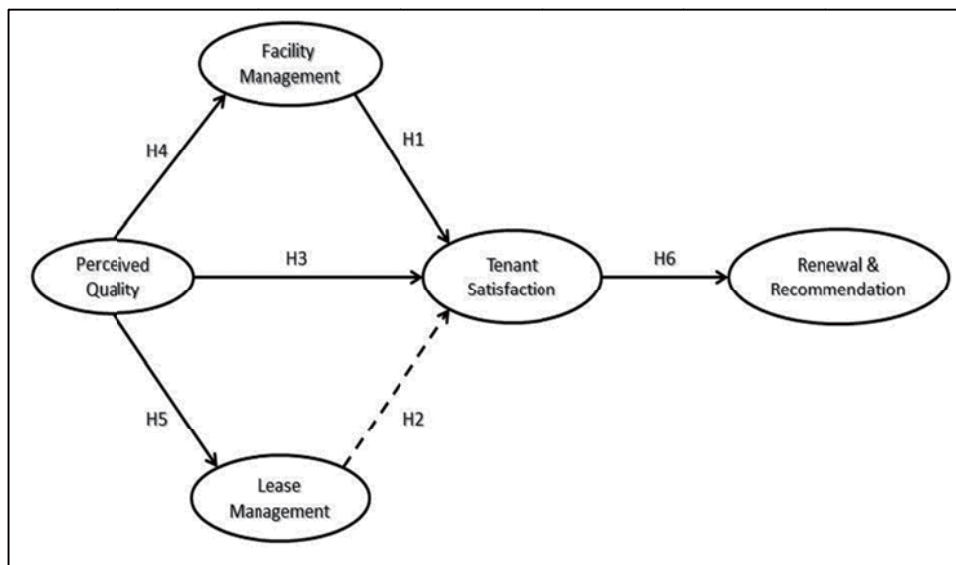
Hypothesis H6 ( $b = 0.638$ ,  $p < 0.01$ ) is strongly supported, which seconds many researchers who found that satisfied tenants will be more than willing to renew the lease and

recommend the high quality of the property management service to others.

Figures 2 and 3 exhibit the results of the PLS structural model analysis (see Figure 2 and 3).



**Figure 2.** Results of the PLS structural model analysis (extracted from SmartPLS)  
The cross represents the one hypothesis that is not supported.



**Figure 3.** Results of the PLS structural model analysis

Note: A significant relationship is represented with a solid line; an insignificant relationship is represented with a dashed line.

#### 5.4. Assessment of Model Fit

Tenenhaus, Amato and Vinzi, (2004) suggested a widely recognized goodness-of-fit instrument. The goodness-of-fit (GoF) index measures the predictive performance of the measurement model (Henseler & Sarstedt, 2013). It is also referred to as the geometric mean (GM) of the average communality as well as the average  $R^2$  of the endogenous latent variables.

$$GoF = \sqrt{AVE * R^2}$$

The GoF value derived from the research model is 0.408. The computed geometric mean of the AVE is 0.690 and the average of  $R^2$  is 0.241, respectively. Since the computed GOF value of 0.408 is greater than 0.36, which is the minimum value recommended by Wetzels, Odekerken-Schröder and Oppen (2009), it shows good enough support to validate the PLS model of this research study.

#### 5.5. Qualitative Analysis

Table 8 summarizes the qualitative inputs from the survey results. This feedback was received in response to the question 'Describe at least one recent incident that affected your satisfaction negatively as a tenant.' A total of 126 cases (51% of the 247 survey participants) were recorded and categorized into 19 groups of similar issues with the three variables of facility management, lease management and perceived quality.

Facility management has the highest concern for 74% out of the 126 incidents in total, providing further evidence for the research model outcome of the highest path coefficient of 0.291 to tenant satisfaction among the three variables. This is followed by perceived quality with 21% and lease management with 5%. The lowest appearance of issues about lease management reflects Hypothesis 2, which is not supported. The findings imply that compared with facility management and perceived quality, lease management has a lower degree of impact on tenant satisfaction overall (see Table 8).

**Table 8.** Summary of qualitative inputs from the survey participants

Highlighted issues by participants	Number of incidents			Qualitative remarks
	Facility management	Lease management	Perceived quality	
Lift/elevator issues	22		2	Breakdown, frequent breakdown, long waiting time, poor maintenance, long repairing time, slow response to the breakdown
Toilet/washroom issues	18			Unhygienic, pipe leakage, poor maintenance, long repairing time
Air-conditioning system issues	12		2	Breakdown, temperature too cold and no control, wasting energy, smelly air duct, slow/no response to the breakdown
Responsiveness and contactability			13	Slow response, long waiting time, no response, no follow-up, long processing time for certain work applications
Electrical power system issues	9		2	Power failure, frequent power failure, slow restoration time, owner not aware because FM is outsourced
Overall maintenance and cleanliness	10			Overall poor maintenance, cleanliness in common area, looks tired and dirty, things break down easily, reluctant to take care
Water seepage/leakage issues	5		1	No permanent solutions, slow response, long repairing time
Car park issues	5		1	No waiting area, frequent barrier breakdown, slow response in solving processing issue and onsite issue
Attitude			4	Bad, hostile, poor treatment, poor understanding
Nuisance in the building	3		1	Frequent false fire alarm; sound test without early notice; poor manage of renovation works
Building facades and image issues	3			Landlord not making financial contribution, affects tenant's company image, poor maintenance
Policy and flexibility		3		Different officers have different standards; landlord draws line in areas (need temporary storage); not allowed to hold small staff event in common space even occupying the entire floor
Security issues	2			Poor service
Lighting issues	1			
Amenities issues	1			Closure of cafeteria
Shuttle bus service	1			Service was terminated
Rent issues		1		Unjustified rent increment
Termite issues	1			
Special issues		2	1	lack of information and communication
	<b>93</b>	<b>6</b>	<b>27</b>	Total qualitative feedback = 126 cases
	74%	5%	21%	% of the overall qualitative feedback
	38%	2%	11%	% of the overall survey participants (247)



## 6. Implication for Management

From the research finding, we can see that the loading factor of the indicator of expectations of landlords' visits is surprisingly low. This leads us to believe that some tenants may not welcome too frequent proactive visitations from their landlord, but rather they expect the owner always to be contactable when issues arise. Next, the loading factor for lease renewal with a good package indicator is also low. This explains that a bad experience in the past hinders the intention to renew despite an attractive package. The research outcome and model provide an overview of the importance of each component. They encourage the top management of landlords to embrace the synergy and cohesiveness among the departments and forgo silos (Bandy, 2003). The intrinsic customer satisfaction with the organization can be studied, which is also important (Dahlsten, 2002) for interdepartmental strategic planning and further monitoring (Coenen, Waldburger, & Felten, 2013) to achieve extrinsic customer satisfaction.

Customer segmentation has to be clearly defined. The willingness to pay extra for the amenities as expected by the shareholders (Feige, Wallbaum, Janser, & Windlinger, 2013) would be dependent on the group of customers. Likewise, for the green lease, green marketing can be used as a complementary method in brand positioning (Eerikainen & Sarasoja, 2013). Hodges (2005) stated that many positive economic effects of green buildings are not apparent immediately. Arguably, a number of factors are debated concerning the continuing adoption of green principles and practices (Roper and Beard, 2006). The research by Reichardt, Fuerst, Rottke and Zietz (2012) demonstrated that certified green buildings command higher rental rates than non-certified buildings.

Besides that, the preventive maintenance for the facilities has to be robust and the corrective maintenance has to be a quick response for system recovery in order to maintain the tenant satisfaction (Lind & Muyingo, 2012). Even a short disruption in the tenant's operation may cause a remarkable profit loss to the business (Ventovuori & Lehtonen, 2006). Prior to having the facility management in place is the new building design; the mechanical and electrical system designs have to be taken into consideration operationally, like lift speed, air-conditioning system control and backup power system. Performance measurement with benchmarking serves as a catalyst in generating innovation in the performance process (Pitt & Tucker, 2008) for landlords to establish a service standard. Environmental knowledge has also become a vital attribute in facility management (Nousiainen & Junnila, 2008). Facility managers are encouraged to redefine their role as one that reinforces business needs, formulates sustainable policies

and brings value to the property management services with a positive impact on the global environment (Roper & Beard, 2006).

Another implication concerns the outsourcing activity, in which the landlord management must understand how and which part of the work is to be outsourced. Without understanding the process, it is difficult to decide which areas can be performed in house and by others. The outsourcing decision should not be executed simply because of costs and benefits, to avoid the daily business operating haphazardly (Farncombe & Waller, 2005). The impact of satisfaction is obvious. Retaining tenants is the utmost concern for building owners to generate revenue by minimizing the cost of vacancies and acquisition without losing the tenants (Sullivan, 2012). On top of that, quality of property management services is also packaged by the owner of the building as the selling point during the property selling transaction (Hui, Lau, & Khan, 2011).

## 7. Limitation and Future Research

This research examines the impact of property management services on tenants' satisfaction with industry building. Similar research could be carried out in future for commercial buildings and other types of buildings, like hospitals and shopping malls, but the populations would then be different. There are pitfalls concerning the measurement of customer satisfaction, in which sometimes customers have the tendency to mitigate satisfaction with unrealistic expectations (Adamson, 1994). The satisfaction ratings are always affected by events with a recency effect. Another area that was not covered in this research is the influence of building characteristics (like size, age, location) and external economic factors on renewal probability. Asser (2004) stated that lease renewals have another aspect that does not relate to human interaction.

Knowing the determinants of customer satisfaction will allow landlords to understand where the operating expenditures should be allocated and prioritized. Further research can be conducted to examine the correlation of an increase in operating expenditures with an increase in customer satisfaction. Furthermore, other than market demand, which leads to a rise in rent, a study of the factors involved in the willingness to pay the premium would be a complement to this research.

## 8. Conclusions

This research reveals the demands from the tenants in property management and the challenges to the landlords to

achieve a high satisfaction level in industrial buildings. The three components, which are facility management, lease management and perceived quality, were meticulously analyzed to understand their degree of influence on tenant satisfaction and how the satisfaction is linked to tenant renewal or recommendation. Sullivan (2012) claimed that the physical attributes of the property are more influential on tenant retentions; in agreement, we also uncovered from this research that the human interaction and the service are equally important. There is a direct correlation between overall tenant satisfaction and satisfaction with property management teams. Keeping the tenant satisfied is as good as keeping the building occupied for business revenue.

The study showed that landlords should be encouraged to establish priorities and define quantifiable benchmarks to improve the property management services. Implementing tenant relations programs like a 'Green Tenants Competition' could be part of the education to encourage green leases. It is always believed that there is a propensity for customers to pay more for something that is superior. Tenants no longer

seek merely shelter in a building, but need spaces enabling innovations and social interaction. It is crucial for industrial landlords to have sufficient information about the tenants, since knowledge of their needs and preferences enables building owners to respond to changes efficiently (Niemi & Lindholm, 2010). The competition for tenants is even more aggressive nowadays. The older buildings and less optimum locations need to compete with new and more technologically advanced buildings, in which the only way to beat rivals within the capability is through quality relationships with the tenants (Rasila, 2009) via superb service quality.

The main intent of this study was to develop a comprehensive understanding of property management services about tenant satisfaction as it applies to business-to-business relationships in industrial buildings. The overall findings of this research will potentially help real estate developers and property managers to develop better property management systems, leasing programs and tenant retention strategies.

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Print ISSN: 2288-4637 / Online ISSN 2288-4645  
doi:10.13106/jafeb.2017.vol4.no3.75

# The Effect of Country-of-Origin on Customer Purchase Intention: A Study of Functional Products in Vietnam

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Received: May 30, 2017 Revised: July 31, 2017 Accepted: August 5, 2017

## Abstract

This paper examines key determinants and the effect of country-of-origin on customer's purchase intention of functional food and dietary supplement product in Vietnam. Exploratory study was identified to evaluate personal and social factors on customer's buying behavior. Twenty-eight reflective constructs were adapted from literature and designed by using a seven-point Likert scale to facilitate measurement. By using non-probability convenience sampling, data was collected from a survey of 242 Vietnamese who have experienced in buying functional and supplement food. This paper employed partial least square structural equation modeling (PLS-SEM) as a technique employed to analyze the measurement and structural models. The findings provide evidence that social prestige customer perceives and their positive attitude toward functional food which are main factors influencing on consumers' purchase intention. Customer's perceived prestige plays an important role in decision-making process to purchase. The higher social prestige taken up in consumers' mind, the higher consumers' purchase intention is. Moreover, the more positive attitude customer holds toward functional food, the higher consumers' purchase intention. The research results provide useful information in current understanding of what antecedents determine factors influencing customer's intention to purchase functional food and lead to managerial implications for business strategies.

**Keywords:** Belief, Consumer Animosity, Attitude, Social Prestige, Purchase Intention, Vietnam.

**JEL Classification Code:** M16, M30, M31.

## 1. Introduction

In the modern society, health is one of the central values. Consumers are increasingly aware that food influences health condition (Young, 2000). This growing consumers' awareness together with progress in various fields of science provides companies with opportunities to develop a range of new functional products. The objective of the developers of a technical product is to combine the obtained knowledge about the consumers' requirements with the knowledge of what is technically possible (Kraus & Popek, 2013). Healthy nutrition is essential to prevent diet-related chronic diseases (Choi & Zhao, 2014; Goetzke & Spiller, 2014; Jebb, 2007) so that functional food became

increasing important. It is due to the long-term changes in the society, as well as socio-demographic trends. It is related with the rising costs of health care, steady increase of life expectancy and the fact that the elderly is interested in the improvement of their quality of life (Roberfroid, 2000).

Functional foods and nutraceuticals are defined as products (Diplock et al., 1999) that are demonstrated to affect beneficially one or more target functions in the body, beyond adequate nutritional effects, in a way that is relevant to either improved state of health and well-being and/or reduction of risk of disease'. Social country-of-origin factors such as: social prestige, social animosity and norms are also one of the important factors needed for the acceptance of functional food, especially for foreign product (Verlegh, 2007; Yang, 2014). An important motive for consumption of functional food is the level of consumer animosity and the belief of good health the product promises to bring, which form the attitude toward functional food consumption (Oh & Jeong, 2015; Yang, 2014). This paper aims to examine how consumers' purchase intention of functional food is jointly influenced by consumers' perceptions of the individual and

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social country-of-origin factors where functional food products derive from.

## 2. Conceptual Framework and Hypotheses Development

This study proposes a comprehensive model that encompasses how country-of-origin factors affect purchase intention. Apart from that, the model identifies other 4 factors: belief, consumer animosity, attitude, and time limited pressure to determine customer's purchase intention. Based on the conceptual model and literature review, eleven hypotheses have been articulated to describe the relationships between the driving forces behind customers' purchase intention.

### 2.1. Consumer's Belief on Purchase Intention and Attitude toward a Product

A belief is a descriptive thought a person holds about something (Pollay & Mittal, 1993). A person seems to hold a distinct and specific opinion about various aspects of any product's brand which affects their intention to buy products of that brand (Oh & Jeong, 2015). Besides, depending on the strength of customer's beliefs, purchase intentions of product vary greatly. Customer with positive beliefs about a brand have strong purchase intentions for that brand's product, while those negative beliefs tend to be reluctant in making purchase decision (Jabeur, 2015). Following these arguments, it has been postulated that:

*H1: Belief about product quality is positively related to purchase intention of customer for functional food and dietary supplement product.*

Zeithaml (1988) defined a belief about product quality as a consumer's judgment about a product's overall excellence or superiority. Based on this definition, we define beliefs about product quality as a consumer's judgment about the overall excellence or superiority of brands. Furthermore, past research shows that brands associated with different markets elicit distinct and different beliefs of product quality (Papadopoulos & Heslop 1993). Brands from emerging markets tend to have a net negative COO effect because emerging countries are associated with unfavorable country attributes such as poor product quality (Liu & Johnson 2005; Rosenbloom & Haefner 2009). Based on these arguments, it has been posited that:

*H2: Belief about product quality is positively related to attitudes towards the brand from an emerging country.*

### 2.2. Consumer Animosity on Attitude toward Product and Purchase Intention

Besides, Klein et al. (1998) defined consumer animosity as "remnants of antipathy toward a country related to previous or ongoing military, political or economic events". One's animosity toward a country, including war animosity and economic animosity, can lead to negative attitude toward a product from the focal countries (Nijssen & Douglas 2004; Huang et al., 2010). Thus, based on these previous studies, we propose that:

*H3: Consumer animosity is negatively related to attitudes towards the brand from an emerging country.*

*H4: Attitudes toward brand from an emerging market are positively related to purchase intention.*

A prominent member among the factors contributing to judging the quality of products and services originating in foreign countries is consumer animosity. To be more specific, consumers who hold high level of grudge or feel animosity towards a foreign country are likely to denigrate its products and refuse to purchase them (Phau et al., 2010). In addition, Shimp et al. (2004) suggested that animosity towards foreign countries would often stem from the lingering influence of past war. Thus, consumer animosity of customer has a significant negative effect on purchase intention of Japanese products. So based on these viewpoints, we propose:

*H5: Consumer animosity is negatively related to purchase intention.*

### 2.3. Relationship between Customer Attitude and Purchase Intention under Time-limited Pressure

Weber et al. (1987) once stated that time-limited pressure is a concept that significantly relates to information load of an object. More importantly, Pavi and Nowlis (1999) showed that when people are forced to make a choice, there can be some responses to deal with time-limited pressure. One of them is that consumers may change their decision-making strategy under time-limited pressure. Thus, under time-limited pressure, decision makers often accelerate their decision-making process, speed up their strategy or change their decision making tactics. So based on these possible outcomes when an object is put under time-limited-pressure, we propose:

*H6: Under time-limited pressure, the relationship between attitude toward the functional food and purchase intentions for that product is enhanced.*

## 2.4. Social Prestige on Purchase Intention and Social Norm

As stated by previous researcher, consumers often use possessions to formulate and alter their own identities, in order to fit their own projections of who they are and aspire to be (Hung et al., 2011). Some individuals consume product of any brand for the symbolic meaning (Truong et al., 2008, p. 191) it communicates to the society where that individual is living in. This is particularly apparent when the purpose of a luxury brand purchase is to signify wealth, trade up in social status, and/or seek approval (Danziger, 2005; Nueno & Quelch, 1998; Silverstein & Fiske, 2003). All of the above support for the idea that external factor like perceived social status (social prestige) will stimulates individuals' intention to purchase a product. So we propose that:

*H7: Social prestige associated with a brand of market from developed country is positively related to purchase intention.*

Steenkamp et al. (1998) once defined brand prestige as a relatively high social status associated with a brand. If a consumer perceives that her or his relevant others hold a positive view related to brands from a given country, she or he may be likely to choose that brand in order to obtain social approval or reward (Batra et al., 2000) and vice versa. Because functional food brands from developed countries such as: US, Japan, Korea is seen as prestigious. So that we propose social prestige will be positively related to perceived social norms regarding brands from developed country (Yang, 2014).

*H8: Social prestige is positively related to social norms regarding brands from market of developed country.*

## 2.5. Social Animosity, Social Norm and Purchase Intention

According to Yang et al. (2014), social animosity refers to a set of individual's negative perception toward a country where a product comes from, which is define as social animosity in this thesis. Social animosity is in fact an expanding definition of customer animosity, because society is a group of individual. And because brands can signal group belongings and differentiation, in order to be a part of a national group, the individual may be forced to show her or his allegiance to the group by displaying public acts of disapproval towards groups (i.e., countries) that are not considered friendly or competent. Hence, a consumer may avoid buying brands from countries that are deemed to be rivals by their relatives and relevant others. Thus:

*H9: Social consumer animosity is negatively related to social norms regarding brands from markets of developed country.*

According to Klein et al. (1998, 2002), Animosity is defined as antipathy related to previous or ongoing political, military, economic, or diplomatic events. It is proved to affect consumers' purchase behavior. Specifically, it has a direct, negative effect on consumers' purchase behavior. Besides, a case study conducted by Ettenson and Klein (2005) have pointed out that Chinese consumers' animosity toward Japan was related negatively to their willingness to purchase Japanese products. And more important, this effect was independent of their judgments about the quality of Japanese product. Based on these arguments, we propose:

*H10: Social consumer animosity is negatively related to purchase intention of customer for functional food and dietary supplement product.*

Yang (2014) defines social norms as one's perceived uni-dimensional evaluation of the brands from a country among reverent others. In addition, according to TRA theory, subjective norms reflect a person's belief about whether his or her significant others think that he or she should perform a particular act (Ajzen & Fishbein, 1977). To be more specific, prior papers on social influence suggest that individuals tend to match attitudes, beliefs and behaviors to group norms (Deutsch & Gerard 1955, Kelman, 1958). However, there are two kinds of social influence: informational social influence and normative social influence. Normative influence often results in internalization, which is defined in sociology as the process of acceptance of a set of norms and values established by people or groups (Scott, 1971). Therefore, due to the internationalization process, social norms (positive norms in this context) can influence an individual's purchase intention. Hence, we propose:

*H11: Social norms associated with functional food and dietary supplement products in Vietnam are positively related to purchase intention.*

## 3. Research Methodology

### 3.1. Operationalization of Constructs

To measure the various constructs, validated items were adapted from prior studies and revalidated for this study. All the focal constructs of the model were measured using reflective constructs that were adapted from literature and

designed by using a seven-point Likert scale to facilitate measurement, with a rating scale from (1) "strongly disagree" to (7) "strongly agree."

The following briefly describes the eight variables used in our models. First, the measurement for belief was drawn from a prior study, which measured the consumer's belief of consequences of buying brands from a specific country (Dodds et al., 1991), it used five survey items that are common in measuring belief as antecedent of attitude and indicator of purchase intention. Second, the consumer animosity construct is defined as consumers' remnants of antipathy toward a country related to previous or ongoing military, political or economic events (Yang, 2014), the eight-item measurement for this construct was adapted from Klein et al. (1998) study. The third variable uses the three-item measurement adapted from Dematos et al. (2007) study, which investigated the consumer's attitude toward buying brands from country. Fourthly, the purchase intention construct is defined as one's personal action tendencies relating to the brands from a country (Yang, 2014), the three-item measurement for this construct was adapted from Spears and Singh (2004) study. The fifth variable uses the six-item measurement adapted from Beauty (1998) and Lim (2013), and Wong (2009) study, which is the perceived constriction of time available for an individual to perform a given task, it is generated mainly when individuals do not have enough time to find a solution or make a better choice. Sixthly, the social prestige construct is defined as consumer's perceived social status associated with brands from a country in a product category (Yang, 2014), the three-item measurement for this construct was adapted from Baek et al. (2010) study. Further, the social animosity construct is defined as one's perceived remnants of antipathy among relevant others toward a country related to previous or ongoing military, political or economic events (Yang, 2014), the three-item measurement for this construct was adapted from Klein et al. (1998) study. And lastly, the social norm construct is defined as one's perceived pressure from relevant others related to buying brands from a country (Yang, 2014), the five-item measurement for this construct was adapted from Ham et al. (2015) study.

### 3.2. Survey Administration and Sample

This study employed a survey method, using a questionnaire to test the conceptual model and developed hypotheses. The prospective respondents were chosen randomly. This procedure enabled the researchers to access a sufficient number of prospective participants for this study. We use google online survey platform and then send it directly to each respondent together with an

invitation letter to complete the questionnaire. Apart from using this online survey method, we use the former technique of questionnaire administration, which is giving out the questionnaire directly to respondents. The sampling frame of this study consisted of medical clinics, universities, offices. We distributed questionnaire by hand to the respondents in these areas. They completed the questionnaire and handed it to the researcher. A total of 300 were distributed with 242 being returned, expressing a return rate of 80.6%.

Among these respondents, 35% were males and 65% were females. The result shows that 33% of the respondents is at the age of 18-22 year olds, and 67% of respondent is at the age of above 22. Most of respondent have a bachelor's degree: 88%, the rest have high school diploma or college: 12%. Besides, 53% of respondent whose occupation is office worker, freelancer and some of them have other job, but student takes up 47% of respondent in this survey. The majority of respondent (43%) get a monthly income from 5 to 10 million VND, 42% has less than 5 million per month, 14% has 10 to 15 million, and only 1% has more than 15 million per month. More important, all of the respondent is aware of the existence of functional food and they have knowledge (27%) and experience both using (21%) and having intention to buy it (52%). Finally, among 4 countries that mentioned in this survey for consumer's choice, US is the most voted country to buy functional food from, Japan come in second place and Korea and China take the third and fourth place. As the result from running pilot survey on 22 respondents indicate all the Cronbach's Alpha values are more than 0.7, which means the internal reliability and consistency of the questionnaire are confirmed.

## 4. Results

The research model was tested using the structural equation modeling (SEM), applying a partial least square method (PLS) using SmartPLS 3.0. This technique permits the simultaneous estimation of multiple equations and performs factor analysis including regression analysis all in one step (Hair et al., 2006). The research followed a two-step approach. First, the measurement model was estimated based on the confirmatory factor analysis. Second, the researchers analysed the structural model and estimated the path coefficients, both for the direct as well as for the mediated effects. The focus of the analysis in this study is on predicting what factors related to customer's purchase intention for functional food and dietary supplement.



#### 4.1. Measurement Model Test

To ensure the measurement model, we employed PLS to assess the psychometric properties of all the scales used in this study. Because all the constructs adapted in this thesis contain reflective indicators, validity and reliability test are necessary (Hair et al., 2014). Each of the indicators are checked whether it is suitable to measure the intended target. Overall, eleven items were eliminated from the scale. To be more specific, two items from Belief, two from consumer animosity, one from purchase intention, three from time-limited-pressure, one from social animosity, two from social norm were removed from the scale. the measurement scale remains twenty-eight items for eight constructs. as shown in table 1, the loadings of all indicators were greater than 0.7, demonstrating convergent validity (Hair et al., 2013). In addition to the composite reliability (CR), the average variance extracted (AVE) of these constructs achieved the cut-off point, indicating a satisfactory degree of reliability with ranging from 0.589 to 0.794. This result indicates that the measurement model has demonstrated an adequate convergent validity (Chin, 1998), see Table 1.

The discriminant validity was tested using the Heterotrait-monotrait ratio. All the ratios showed good discriminant validity properties (Table 2). The result of the measurement model indicates that various validity and reliability criteria were satisfied. Therefore, the constructs the constructs and their measures could be adequately discriminated, and appropriated to predict relevance for the structural model and associated hypotheses.

**Table 1:** Factor Loadings and Composite Reliability of the Measurement Model

Constructs	Items	Factor Loadings	CR	AVE
Belief (BL)	3	0.744 – 0.919	0.866	0.684
Consumer Animosity (CA)	6	0.709 - 0.829	0.895	0.589
Attitude (AT)	3	0.817 - 0.901	0.902	0.754
Purchase Intention (PI)	2	0.869 - 0.913	0.885	0.794
Time-limited-pressure (TLP)	3	0.757 - 0.885	0.873	0.697
Social Prestige (SP)	3	0.865 - 0.881	0.907	0.765
Social Animosity (SA)	7	0.725 - 0.849	0.921	0.624
Social Norm (SN)	1	0.935	0.871	0.695

Note: CR = Composite Reliability,  
AVE = Average Variance Extracted.

**Table 2:** Result of the Discriminant Validity Using Heterotrait-monotrait Ratio

	AT	BL	CA	PI	SA	SN	SP	TLP
AT	<b>0.868</b>							
BL	0.264	<b>0.827</b>						
CA	0.203	-0.109	<b>0.767</b>					
PI	0.655	0.283	-0.196	<b>0.891</b>				
SA	-0.101	-0.112	0.629	-0.091	<b>0.79</b>			
SN	0.417	0.506	-0.233	0.367	-0.198	<b>0.834</b>		
SP	0.460	0.243	-0.044	0.483	0.016	0.344	<b>0.874</b>	
TLP	0.356	0.236	0.017	0.309	0.100	0.120	0.297	<b>0.835</b>

Note: Diagonals (in bold) represent square root of the AVE

#### 4.2. Assessment of Structural Model

In PLS, the predictive accuracy of the model was evaluated in terms of the portion of the variance explained. The results suggest that the model was capable of explaining 50.2% of the variance in Purchase intention (PI). Meanwhile, attitude explains 12.7% of the variance in time-limited-pressure (TLP). On the other hand, 10.1% of the variance in attitude (AT) is explained by belief and consumer animosity. Finally, social prestige and social animosity explain 16% of the variance in social norm (SN). Apart from computing the  $R^2$  value, many experts have come to consider  $Q^2$  value (the predictive relevance) suggested by Stone (1974) and Geisser (1975), as an extra assessment of model fit.  $Q^2$  value can be referred to adequacy of the model to foretell the indicators of each latent variable. In regarding to the construct model, values of  $Q^2$  with larger than zero with respect to a particular reflective endogenous latent construct indicate that the model has a relevant prediction power for that specific variable (Chin, 2010). We run the blindfolding function using Smart PLS, the values of  $Q^2$  are gained on a 7 omission distance. As the result we get in the table below: the predictive relevance of all the  $Q^2$  values is larger zero, ranging from 0.064 to 0.414 which shows that the model of path takes advantage of high prediction relevance concerning the all given endogenous variables. In summary, the model exhibited an acceptable fit and high predictive relevance.

Nonparametric bootstrapping was applied (Wetzels et al., 2009) with 2000 replications to test the structural model. The significance of the direct effects specified by the research model was evaluated (Table 3). The results indicate that the effects Purchase intention is influenced directly by Attitude ( $\beta=0.474$ ,  $t=5.455$ ,  $p<0.$ ), and Social prestige ( $\beta=0.185$ ,  $t=3.12$ ,  $p<0.002$ ). As a result, hypotheses

H4 and H7 are supported. From the analysis, Attitude is influenced directly by Consumer animosity ( $\beta=0.177$ ,  $t=2.843$ ,  $p<0.005$ ) and Belief ( $\beta=0.245$ ,  $t=2.578$ ,  $p<0.01$ ). As a result, hypotheses H2 and H3 are supported. Additionally, under time-limited pressure is affected by attitude toward the functional food ( $\beta=0.356$ ,  $t=6.025$ ,  $p<0.001$ ). Meanwhile, Social norm is influenced directly by Social prestige ( $\beta=0.348$ ,  $t=5.053$ ,  $p<0$ ) and Social animosity ( $\beta=0.204$ ,  $t=4.137$ ,  $p<0$ ). As a result, hypotheses H8 and H9 are supported (Table 3).

**Table 3:** Structural Model Analysis

Dependent Construct	Independent Constructs	Path Coefficient	Observed T-statistics	Significance Level
Purchase intention (PI) $R^2=0.502$	<-TLP	0.038	0.783	0.434
	<-CA	-0.039	0.622	0.534
	<-AT	0.474***	5.455	0.000
	<-BL	0.075	1.260	0.208
	<-SP	0.185**	3.120	0.002
	<-SN	-0.015	0.236	0.813
Attitude (AT) $R^2=0.101$	<-SA	0.029	0.395	0.693
	<-CA	-0.177**	2.843	0.005
Time-limited-pressure (TLP) $R^2=0.127$	<-BL	0.245**	2.578	0.001
	<-AT	0.356***	6.025	0.000
Social norm (SN) $R^2=0.160$	<-SP	0.348***	5.053	0.000
	<-SA	-0.204***	4.137	0.000

Note: \*\*\*  $p < 0.001$ ; \*\*  $p < 0.05$

## 5. Discussion

In this paper, the level of customer's positive attitude for functional food has been identified to have positive influence on customer's purchase intention toward that product. This result is consistent with previous studies that examined the extent to which attitude affects customer's behavior (Ajzen, 1991, p.188). For instance, Ajzen proved that the more favorable attitude toward performing a behavior a person is holding, the stronger intention he or she will make to perform the behavior (Ajzen, 1991, p.181). Based on the research findings, besides attitude, customer's purchase intention is also identified to be positively influenced by the level of social prestige perceived by customer. This finding is in line with previous studies that examined the factor like social prestige stimulates individuals' intention to purchase a product (Berthon et al., 2009; Tsai, 2005; Vigneron & Johnson, 2004). Also, Tsai (2005) and Vigneron and Johnson (2004) expand the theory by giving out supports and clues contributing to theory: consumer's perceived

social prestige stimulates their intention to purchase a product.

On the other hand, level of consumer animosity as well as level of social animosity toward country where functional food comes from has been confirmed to have no significant influence on customer's purchase intention toward that product, which contradicts the proposed hypotheses that consumer animosity towards a country engenders reluctance to purchase its products (Phau et al., 2010). One possible reason for their non-significant relationship with purchase intention is because the difference in demographic of survey respondent: the extent of grudge young Vietnamese people hold against country that had military conflict with Vietnam is not sufficient enough to generate feasible effect on decision-making process for purchasing functional food from countries had war with Vietnam before.

Also, belief about healthy effect functional food brings to customer has been identified to have no significant influence on customer's purchase intention toward that product, which is not in line with the founding of Oh and Jeong (2015) that the beliefs of consumers are somehow very important determinant of its purchase intentions. One possible reason for its non-significant relationship with purchase intention might be the context used to test the construct "belief" in this thesis: In Vietnam, functional food and dietary supplement are still new to people and it does not really take appropriate image in Vietnamese mind. In short, Vietnamese respondent is this survey either choose to use functional food for other reasons but not for the belief of healthy effect it provides or they are indifferent with their purchase intention regardless of their belief about functional food.

In addition, social norm has been identified to have no significant influence on customer's purchase intention toward that product, which is contradict with theory provided by Yang et al. (2014) and Theory of Reason Action (Fishbein & Ajzen, 1975) stating that purchase intentions are a result of individual attitudes towards the brand and the social norms associated with the brand. One possible reason for its non-significant relationship is the lack of a target brand so that consumer can associate their specific evaluation and assess to what their relatives and friends about that brand.

## 6. Conclusion and Implications

From the research data analysis and result, we can conclude some reasons why functional food and dietary supplement are consumed slowly in Ho Chi Minh City. According to the research result, the higher social status and prestige taken up in consumers' mind (word-of-mouth,

brand popularity, company's fame, etc.), the higher consumers' purchase intention is. Moreover, the more positive attitude customer holds toward the manufacturing process of functional food, its company's marketing program, product's packaging, network of distribution, and how the company performs corporate social responsibility, the higher consumers' purchase intention. To get better understanding about what antecedent influencing factors affecting purchase intention, we look into the positive relationship between customer belief and their attitude, the negative relationship between customer animosity and their purchase intention. Specifically, if customer believe well in the good effects functional food can generate, their attitude toward it will be strengthened and vice versa. Those are partially the reasons why functional food is slowly consumed in market. Therefore, in order to increase consumers' purchase intention, sellers and investors should:

Improve manufacturing process of functional food to better off customer health. Adjust company's marketing program to attract customer, leverage the image associated with company brand and products. Besides, incorporate elements of trust and enjoyment within the advertising campaign to gain customer belief and lower their level of animosity. It is vital to increase the social status they

perceive. All of which aim to enhance the social prestige and restrain level of animosity society hold onto where functional food comes from.

As any other previous research, this present study also has limitations. First of all, we examine limited factors which influence customer's purchase intention on functional food. We suggest the next research should consider about other factors that can have significant relationship with customer's purchase intention we were unable to cover. Second, this research is developed based on 242 respondents, in which 47% of sample was collected from undergraduate students who have relatively limited shopping experience and have a different view on the history and the relationship between counties compared to older age groups. Finally, due to time constraints, only 3 months were given for this research. If the research were extends to a longer period of time, the results may varies. The present study should be replicated using a larger sample size with more focused target respondent and with more suitable questionnaire. In addition, future studies may further test the robustness of this study and investigate other individual and contextual factors that might moderate the effect of social norms on purchase intention.

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Print ISSN: 2288-4637 / Online ISSN 2288-4645  
doi:10.13106/jafeb.2017.vol4.no3.85

# Critical Factors Affecting Consumer Acceptance of Online Health Communication: An Application of Service Quality Models

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Received: April 16, 2017 Revised: July 27, 2017 Accepted: August 5, 2017

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## Abstract

The paper examines critical factors affecting consumer behavioral intentions in accepting online health communication through social networking sites. Unlike recent research under this topic, the paper assimilates some components of service quality dimensions and consumer behavior theories. The paper employs factor analysis and structural equation modelling analysis with latent variables to identify critical factors from the survey data collected from Korean consumers. The results of the study identifies three major constructs: consumer needs for health information, the perceived value of tangible attributes of health information providers, and the perceived value of intangible attributes of health information providers. The results show that consumer needs for health information and the tangible and intangible attributes of health information providers should be considered as important antecedents of accepting online health communication through social networking sites. The findings suggest that the success of online health communication via social networking sites largely depends on the tangible and intangible attributes of health information providers.

**Keywords:** Structural Equation Model, Factor Analysis, Health Information, Health Communication, Health Information Providers, Service Quality, Tangible Attributes, Intangible Attributes, Korea.

**JEL Classification Code:** L86, M15, M31, M37.

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## 1. Introduction

Access to the Internet and social networking sites has witnessed a remarkable growth in all regions of the world. Social networking sites are rapidly transforming the way people communicate around the world. They elevate electronic communication to near face-to-face methods with one of the most popular connected devices that people use today being the mobile phone.

Social networking sites are rapidly emerging as a popular platform of providing health information especially for teens and young adults. Therefore, health information providers should recognize the importance of and the usefulness of social networking sites to communicate health information. In this regard, a better understanding of consumer behavioral intentions to use social networking sites in searching health information is an important and timely area

of research. This paper attempts to incorporate some components of service quality dimensions and consumer behavioral theories to identify critical factors affecting consumer behavioral intentions to accept online health communication through social networking sites.

## 2. Literature Review

### 2.1. Health Communication over the Internet and Social Networking Sites

As health information becomes increasingly available over the Internet and social networking sites, individuals take a more active role in managing their personal health information by the use of the Internet and social networking sites. For example, a study reports that health information seekers turning to the Internet are younger, more educated and have higher income (Koch-Weser et al., 2010). However, another study reports that individuals' trust in online health information did not correlate with personal capital factors such as income, education and health status

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(Ye, 2010). It is said that, as individuals perceive their health communication with providers to be less patient-centered, they are more likely to engage in various types of online health communication activities such as using websites and social networking sites (Hou & Shim, 2010). A study reports that the trust in online health information is a significant predictor of online health communication (Rains, 2007). Another study reports that Internet health information has a positive effect on the increasing demand for online health communication (Suziedelyte, 2012).

In addition, Anthunis, Bates, and Nieboer (2013) provide some support that the use of social networking sites in the healthcare service grew significantly through established new information and communication technologies. For example, when Web 2.0 technologies were applied, the online health communication between patients and healthcare professionals were improved.

An increasing number of Internet users who are seeking health information are no longer solely passive consumers of online health information. They are also active producers as well. Social networking sites are increasingly being used as online venues for the exchange of health-related information and advice. For example, a study reports that 35% of online adults used social networking sites within the past 12 months, and there were no significant difference in the use of social networking sites by ethnicity or socioeconomic position (Kontos et al., 2010). Much literature also provides support for the increasing use of social networking sites to promote public health efforts (e.g. Cutrona et al., 2015; Lapinski et al., 2015; Lee et al., 2014; Metzger & Flanagan, 2011; Wright et al., 2013).

Focusing on the flow of communications between patients and healthcare providers, health information exchange was applied to transfer patients' information across healthcare institutions (O'Donnell et al., 2011). The health information exchange improved healthcare communication in the form of personal health records that patients could electronically access to their medical information from anywhere. Also, the patients were able to conduct administrative tasks online. As a result, the use of the health information exchange improved the communication among healthcare stakeholders as well as significant cost saving opportunities for both patients and healthcare providers. In addition, Koivunen, Niemi, and Hupli (2014) also mentioned the use of electronic devices within healthcare professionals which were used for practical nursing communication. It provided several advantages that improved the service quality of health communication. The use of electronic devices improved personal competences and transfer of administrative information. For example, healthcare professionals sent emails to communicate about patients' physical conditions. It was cost-savings and also improved time efficiency.

## 2.2. Service Quality Dimensions of Online Health Communication

Parasuraman, Zeithaml, and Berry (1988) categorized service quality into five dimensions in general, which largely divided into tangibles and intangibles. The tangible includes facilities, equipment and appearance of staff while intangibles are categorized into four dimensions: reliability, responsiveness, assurance and empathy. Clemes, Ozanne, and Laurensen (2001) further highlighted responsiveness, empathy and tangibles as three dimensions that closely related to healthcare services. In addition, it is said that different patients' characteristics led to different needs and wants for healthcare services (Clemes et al., 2001). For example, female patients were more concerned than men about reliability of the healthcare services. However, since the healthcare service has unique characteristics, some studies claim that other dimensions should also be taken into considerations such as efficacy, admission, assurance and empathy (Chaniotakis & Lympieropoulos, 2009), and personalization (Cutrona et al., 2015), for example, the use of personalized e-mail messages. Furthermore, Guiry, Scott, and Vequist (2011) reported that the service quality also depended on consumers' expectations, which compared with their perceptions of the actual service delivered.

With regard to the service quality of health communication, a study reports that the web introduction and the growth rate of Internet allowed people to search health information through search engines (Bert et al., 2013). Electronic health (e-health) was introduced as a new way aiming to improve healthcare communication by using information and communication technology. Furthermore, a study confirms that the use of Internet in the healthcare service industry improved communication through sharing platform (Yew, Choo, & Norishah, 2013). A few websites provided services that connected the cancer patients, caregivers and survivors together, and enabled them to communicate through online forum discussion. Also, the Internet allowed patients and survivors to form healthcare support groups through social media platform. Members of a trusted social group can access to health information in the form of facts, advice and personal experiences (Yew et al., 2013). For instance, the cancer patients and survivors communicate through Facebook, and sometimes shared the information that they thought interesting and reliable, mostly from friends and family. Additionally, they also report that people went online not only to find health information but also to gain peer support.

Another study supports the study of Yew et al. (2013) by introducing online health communities and Internet-based discussion forums (Rupert et al., 2014). The online health communities are peer-generated health information through

social networking sites. Treatments and medications were main communication exchanged by patients and caregivers through these communication channels. Healthcare providers, however, concerned about inaccurate information and some of them might not agree to apply this knowledge to patients' treatments. Some healthcare providers, on the other hand, appreciated the peer-generated health information, and they were willing to apply the health information to patients' treatments (Rupert et al., 2014). Dolce (2011) also reported that the use of Internet enhanced healthcare relationships. Since healthcare providers neither had enough time to communicate with patients nor keep up with the most current information, the healthcare providers or professionals should collaboratively explore online health information with patients or caregivers, which satisfies patients or caregivers in terms of health communication. Bert et al. (2013) report that, according to the women facing a pregnancy, the information from the Internet fulfilled the women needs and empowered them when they spoke to healthcare professionals. Healthcare professionals should either provide more information or guide these women to use reliable websites.

Chung (2013) reported that individuals who turned to the Internet for health information were concerned the most about trusting online health information and the quality of the health information. A possible reason was that the health information customers acquired online caused increasing concerns about their personal health conditions. In other words, the growing anxieties would consequently increase the times that these online health information seekers visit doctors owing to the fact that some online

health information could be incorrect and biased for their use. Therefore, after searching such inaccurate information, patients seemed to visit their health professionals more frequently. Suziedelyte (2012) reported that the Internet was a complement to formal healthcare rather than a substitute for health professionals. Kim and Kwon (2010) reported that while preferring health information directly from their doctors over the Internet, patients use the Internet as their secondary information source. In addition, a study reports that although 35% cancer listserv users chose the Internet as their preferred source of health information, the level of empathy shown by the provider and the quality of time spent with the patient had a significant negative association with choosing the Internet as a preferred source of information (Tustin, 2010). Another study also reports that the higher the unmet need for health information was, the more likely individuals were to spend time in specialized health information (Lee & Hawkins, 2010). They emphasized the important role of provider-patient communication in motivating individuals to turn into the Internet for health communication purposes.

### 2.3. A Conceptual Model and Hypothesis

The hypothesized structural model is displayed graphically in Figure 1. Figure 1 shows the measurement component and the structural component by using thin lines. Big circles represent the latent variables that are unobserved endogenous variables. The indexes on the lines represent hypotheses, which will be replaced by coefficient values of the parameters estimated in the model.

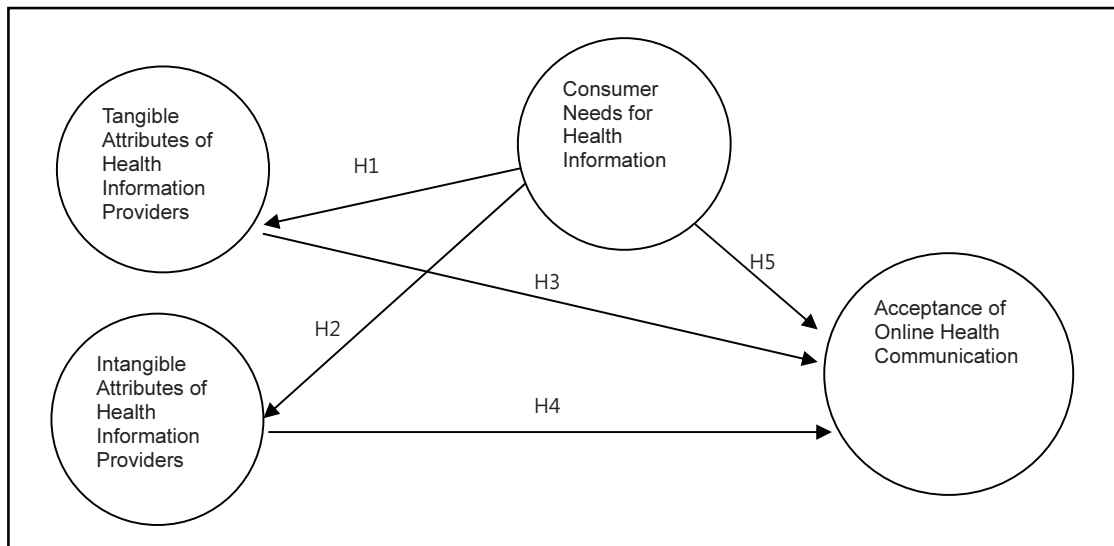


Figure 1. Conceptual Model of Acceptance of Online Health Communication

The following hypotheses are generated for verification based on the review above:

*Hypothesis 1: Consumer needs for health information have a positive effect on tangible attributes of health information providers.*

*Hypothesis 2: Consumer needs for health information have a positive effect on intangible attributes of health information providers.*

*Hypothesis 3: Tangible attributes of health information providers have a positive effect on the acceptance of online health communication.*

*Hypothesis 4: Intangible attributes of health information providers have a positive effect on the acceptance of online health communication.*

*Hypothesis 5: Consumer needs for health information have a positive effect on the acceptance of online health communication.*

### 3. Research Methodology

#### 3.1. Survey and Sample Characteristics

Given that the model embeds complex relationships of acceptance of health communication through social networking sites, this study collected self-reported consumer perceptions using a questionnaire. An initial structured questionnaire was developed based on existing literature (e.g. Keillor, Hult and Kandemir, 2004; Lee, 2010; Parasuraman, Zeithaml, and Berry, 1988). The initial questionnaire included 23 items related to various constructs discussed in this study and 6 items that capture information pertaining to respondent gender, age, monthly income, educational level, employment status, and experience of searching health information through the Internet. The questionnaire was refined based on the feedback and initial analysis. A final questionnaire retained 18 items related to the various construct and 6 items for demographic information.

The principles of scale design and development are well documented in literature (e.g. Nunnally & Bernstein, 1994), and they are used to describe the methods of item selection, content validation, construct validation, reliability assessment, scaling and analysis. Dutta-Bergman (2005) measured health information searching behaviors, defined as a patient's willingness to seek additional health information beyond the doctor, by a single item. The item was measured on a 6-point scale ranging from 1 (= definitely disagree) to 6 (= definitely agree). Maibach et al. (2006) measured health information searching behaviors by multiple items. Each item was measured on a 5-point Likert scale. Stephens, Rimal, and Flora (2004) also measured health information searching behaviors with a three-item composite index measured by a 5-point scale. Although health information searching

behaviors were reported by reliability estimates (Stephens et al., 2004), the methods used in the studies did not lead themselves to reliability measures. In addition, the sensitivity of data in measuring consumer perceptions and behavioral intentions in different cultural contexts also poses a problem for the adoption of a single superior scale due to the limited data comparability (e.g. Bartoshuk, Fast, & Snyder, 2005; Dawes, 2008). For this reason, different researchers have employed different scales in their measurement of consumer perceptions and behavioral intentions as one size does not fit all. A seven-point Likert type scale is used in this study. To sum up, the scale ranges are from (1) strongly disagree, (4) neutral, and to (7) strongly agree.

A web-based survey was conducted with an online survey company in South Korea. There were a total of 746 filled-in questionnaires in the web-based survey, but 260 cases were removed from the analysis because of missing data or outliers. The final sample size was 486 cases that have no missing data and they were used for following analyses. These selected cases include the respondents who have registered to any of social networking sites and have experiences of sharing their health information via social networking sites. The concern that the web-based survey might induce a self-selection bias would be less serious on this sample because online survey participants who participated frequently in this kind of web-based surveys would more likely to respond. Table 1 presents descriptive statistics of the survey and sample characteristics.

**Table 1:** Survey and Sample Characteristics

Characteristics	Classifications	Frequency*	Percent
Gender	Male	178	36.6
	Female	308	63.4
Age group	Under 20 years old	20	4.1
	21 – 30 years old	129	26.5
	31 – 40 years old	181	37.2
	41 – 50 years old	113	23.3
	Over 51 years old	43	8.9
Monthly income	Less than US\$ 1,000	80	16.4
	US\$ 1,001- 2,000	135	27.8
	US\$ 2,001- 3,000	132	27.2
	US\$ 3,001- 4,000	66	13.6
	US\$ 4,001- 5,000	50	10.3
	More than US\$ 5,001	23	4.7
Education level	Secondary (high school)	141	29.0
	Junior college	84	17.3
	College or University	238	49.0
	Graduate	23	4.7
Employment status	Full-time employee	261	53.7
	part-time employee	75	15.4
	Self-employed	86	17.7
	Unemployed	54	11.1
	Other	10	2.1
Experience in searching health information online	Yes	486	100.0
	No	0	0.0

\* Sample size = 486



### 3.2. Factor Analysis and Internal Consistency Reliability Test

Bartholomew (1996) and Basilevsky (1994) provided a comprehensive description of scale development and validation. Evidence of the effectiveness of the scale for its purpose in this study was examined. Many methods of validation rely heavily on the analysis of inter-term or inter-scale correlations. Construct validity embraces a variety of techniques for assessing the degree to which an instrument measures the concept that it is designed to measure: this include testing dimensionality and homogeneity. Construct validation is examined as a process of learning more about the joint behavior of the items and testing new predictions about this behavior. Factor analysis is an often-used technique in this process and purpose. In order to ensure the construct validity of the measurement instrument, factor analysis was employed in a two-stage process. First, the exploratory factor analysis with a varimax rotation procedure was employed to identify underlying predictors based on an eigenvalue cut-off of one. Second, the confirmatory factor analysis using structural equation modeling techniques were employed to confirm that the identified predictors are fitted the items correctly and reliably.

To identify underlying predictors of acceptance of online health communication, factor analysis with a varimax rotation procedure was employed. The component factor analysis was used to uncover the underlying structure of a large set of items and identified four components: component one with five items (eigenvalue = 3.796), component two with five items (eigenvalue = 3.564), component three with four items (eigenvalue = 3.202), and component four with four items (eigenvalue = 2.218). The analysis resulted in the retention of 18 items, which represented the four components. Afterward, the four components were used for the following analysis.

To test the appropriateness of factor analysis, two measures - the Kaiser-Meyer-Olkin and the Bartlett's test - were used. The Kaiser-Meyer-Olkin overall measure of sampling adequacy was 0.894, which falls within the acceptable significant level ( $p < 0.01$ ). The Bartlett's test of sphericity was 5800.907 with 153 degrees of freedom, which shows a highly significant correlation among the survey items ( $p < 0.01$ ). The sums of squared loadings from the four components have the cumulative value of 71.005 percent in explaining the total variance of the data. The results of exploratory factor analysis using principal component analysis extraction method are reported in Table 2.

**Table 2:** Results of Factor Analysis of the Survey Question Items

Item Code	Factor Loadings	Eigenvalue	Extracted Variance	Construct Name	Item-total Correlation	Cronbach $\alpha$
X101	0.597	2.218	12.325%	Tangible attributes of health information providers	0.583	0.780
X102	0.678				0.612	
X103	0.703				0.529	
X104	0.755				0.616	
X105	0.784	3.796	21.087%	Intangible attributes of health information providers	0.726	0.901
X106	0.761				0.746	
X107	0.815				0.760	
X108	0.841				0.770	
X109	0.832	3.564	19.803%	Consumer needs for health information	0.764	0.881
X110	0.781				0.743	
X111	0.774				0.704	
X112	0.789				0.742	
X113	0.740	3.202	17.791%	Acceptance of online health communication	0.712	0.893
X114	0.700				0.673	
Y201	0.709				0.623	
Y202	0.872				0.844	
Y203	0.878	3.202	17.791%	Acceptance of online health communication	0.863	0.893
Y204	0.767				0.734	

Internal consistency reliability is a measure of how well a test addresses different constructs and delivers reliable scores. A more comprehensive description of scale development and reliability is given in literature (Dunn, 1989). Three main reliability tests are split halves, Kuder Richardson and Cronbach's alpha tests. These tests check whether the constructs measured by a test are correct, and whether subject and size of the data and responses dictate the test used. However, the most common method for assessing internal consistency is Cronbach's alpha. The form of intra-class correlation is closely related to convergent validity i.e. the extent to which the items in a scale are all highly inter-correlated. For example, in a series of questions that ask the subjects to rate their response between one and seven, Cronbach's alpha gives a score between zero and one, with 0.7 and above being considered as reliable. The test also takes into account both size of the sample and the number of potential responses.

The Cronbach's alpha test is preferred in this study due to the benefit of averaging the correlation between every possible combination of split halves and allowing multi-level responses. For example, for the four constructs, the internal consistency reliability test provides a measure so that each of these constructs is measured correctly and reliably. The results of internal consistency reliability tests for the four constructs are identified as the following: tangible attributes of health information providers (4 items,  $\alpha = 0.780$ ), intangible attributes of health information providers (5 items,  $\alpha = 0.901$ ), consumer needs for health information (5 items,  $\alpha = 0.881$ ), and acceptance of online health communication (4 sites,  $\alpha = 0.893$ ). The details of the internal consistency reliability tests, including item-total correlation coefficient values, are reported in Table 2.

The confirmatory factor analysis using the structural equation modeling technique was employed to confirm that the identified predictors fit the items correctly and reliably. The results of confirmatory factor analysis indicated that a single factor solution fits the items appropriately:

**Tangible attributes of health information providers:** The tangible attributes variable was measured by four survey items and explained 12.325 percent of the total variance. The factor loading value of each item to the variable is presented in Table 2. The Cronbach's alpha for the scale was 0.780. The confirmatory factor analysis for convergent validity indicated that a single factor solution fits the items acceptably.

**Intangible attributes of health information providers:** The intangible attributes variable was measured by five survey items and explained 21.087 percent of the total variance. The factor loading value of each item to the variable is presented in Table 2. The Cronbach's alpha for the scale was 0.901. The confirmatory factor analysis for

convergent validity indicated that a single factor solution fits the items acceptably.

**Consumer needs for health information:** The consumer needs variable was measured by five survey items and explained 19.803 percent of the total variance. The factor loading value of each item to the variable is presented in Table 2. The Cronbach's alpha for the scale was 0.881. The confirmatory factor analysis for convergent validity indicated that a single factor solution fits the items acceptably.

**Acceptance of online health communication:** The acceptance of health information through social networking sites variable was measured by four survey items and explained 17.791 percent of the total variance. The Cronbach's alpha for the scale was 0.893. The confirmatory factor analysis for convergent validity indicated that a single factor solution fits the items acceptably.

## 4. Results

### 4.1. Structural Equation Model, Estimates, and Path Diagram

The analysis of moment structures was used for an empirical test of the structural model. The maximum likelihood estimation was applied to estimate numerical values for the components in the model. In the process of identifying the best-fit model, multiple models were analyzed because the researchers were testing competing theoretical models. From a predictive perspective, we determined which model best fits the data, but sometimes the differences between the models appear small on the basis of model fit indexes. When comparing non-nested models, the Akaike information criterion fit index is used as our first choice because the difference in the Chi-square values among the models cannot be interpreted as a test statistic (Kline, 2005), the root mean square of approximation fit index is the second choice to be used, and then goodness of fit index will be our third choice to use.

Table 3 displays the estimates of structural equation modelling analysis. The results of the analysis of moment structures generally achieve acceptable goodness-of-fit measures. For example, the goodness-of-fit index of 0.923 indicates that the fit of the proposed model is about 92% of the saturated model (the perfectly fitting model). The normed fit index of 0.912 indicates that the fit of the proposed model is about 91%. Other goodness-of-fit measures are as follow:

**Model fit summary:** The minimum value of the sample discrepancy (CMIN) = 871.868, degree of freedom (DF) = 131, CMIN/DF = 6.655.

**Table 3:** Structural Equation Model Estimates

Hypo.	Path	Regression estimates	Decision	Total effects	Direct effects	Indirect effects
H1	Consumer needs → Tangible attributes	0.427***	Accept	0.427	0.427	
H2	Consumer needs → Intangible attributes	0.350***	Accept	0.350	0.350	
H3	Tangible attributes → Acceptance of online health communication	0.412***	Accept	0.558	0.412	0.146
H4	Intangible attributes → Acceptance of online health communication	0.529***	Accept	0.570	0.529	0.041
H5	Consumer needs → Acceptance of online health communication	0.493***	Accept	0.747	0.493	0.254

Note: Numbers in the cells are standardized coefficient values.

Probability values for rejection of the null hypothesis of zero coefficient are employed at the 0.05 level (\*\*\*  $p < 0.01$ ).

**Model fit measures:** The goodness of fit index (GFI) = 0.923, the adjusted goodness of fit index (AGFI) = 0.909, the parsimony goodness of fit index (PGFI) = 0.895, the root mean square residual (RMR) = 0.043, the root mean square of approximation (RMSEA) = 0.036.

**Baseline comparisons measures:** The Bentler-Bonett normed fit index (NFI) = 0.912, the Bollen's relative fit index (RFI) = 0.902, the Tucker-Lewis coefficient index (TLI) = 0.938, the comparative fit index (CFI) = 0.946.

**Parsimony-adjusted measures:** The parsimony ratio (PRATIO) = 0.905, the parsimony normed fit index (PNFI) = 0.872, the parsimony comparative fit index (PCFI) = 0.895.

The estimate of the non-centrality parameter (NCP) = 740.868, the Akaike information criterion (AIC) = 951.868, the Browne-Cudeck criterion (BCC) = 955.13, and the Bayes information criterion (BIC) = 1119.317.

In testing hypotheses 1 and 2, proving that there are relationships between consumer needs and tangible attributes and between consumer needs and intangible attributes, Table 3 shows that there is a positive relationship between consumer needs and tangible attributes of health information providers and there is a positive relationship between consumer needs and intangible attributes of health information providers. Each pair shows statistical significance at a 95% confidence level ( $p < 0.01$ ). This suggests that consumer needs have a positive and direct effect on tangible attributes of health information providers as well as a positive and direct effect on intangible attributes of health information providers.

Hypotheses 3 and 4 test the relationships between tangible attributes and acceptance of online health communication and between intangible attributes and acceptance of online health communication. Table 3 shows that there is a positive relationship between intangible attributes and acceptance of online health communication and there is a positive relationship between tangible attributes and acceptance of online health communication.

Each pair shows statistical significance at a 95% confidence level ( $p < 0.01$ ).

Hypothesis 5, which tests the relationship between consumer needs and acceptance of online health communication, shows a significant positive relationship at a 95% confidence level ( $p < 0.01$ ). This means that consumer needs for health information have a positive propensity towards acceptance of online health communication.

Overall, consumer needs for health information serve as an important antecedent of acceptance of online health communication. From Table 3, the 0.747 total effects of consumer needs for health information on acceptance of online health communication consist of a direct effect of 0.493 and an indirect effect of 0.254. On the other hand, the intangible attributes of health information providers have the highest impact on acceptance of online health communication, which the 0.570 total effects on acceptance of health communication consist of a direct effect of 0.529 and an indirect effect of 0.041. Overall, consumer needs for health information and the tangible and intangible attributes of health information providers serve as important antecedents of acceptance of online health communication.

## 5. Discussion and Managerial Implications

The results from an empirical analysis support all of the hypotheses. This study shows that consumer needs for health information wield an important influence on their behavioral intention to accept online health communication. The positive impact of the tangible and intangible attributes of health information providers on behavioral intentions of accepting online health communication is a special interest. The results indicate that consumer needs for health information and the perceived value of the tangible and intangible attributes of health information providers should be viewed as important antecedents explaining behavioral intentions to accept online health communication.

Patients and caregivers have exploited the benefits of communication technologies, especially through social networking sites. They are able to form a group to exchange health information, share personal health experience, and gain mental support within the group. Online health communities are diversely used among different groups with different diseases or health topics, such as cancer group and pregnancy group. Since patients need to satisfy their needs of perceiving health information, which they were not fulfilled by healthcare professionals due to physician's time scarcity, these online health communities fulfill the needs of these patients and caregivers. However, the healthcare providers and healthcare professionals should collaborate with patients and caregivers when they come to discuss about the health information that they found on the Internet. The healthcare professionals should be open-minded to listen and apply the reliable online information as well as guide the users to the reliable websites or groups.

Although the number of social networking customers is increasing, they often refuse to release or share their personal information because they do not trust Internet information security. Accordingly, consumers would choose social networking sites as a tool for gathering information for health or purchasing health care products only if they trust the information provider. The online health communication community provides any combination of consulting, promoting, sharing, and providing health information and health care products via social networking sites. Tangible attributes of health information providers via social networking sites refer to the external surrounding and conditions in which something visual. The tangible attributes of health information providers affect its service evaluation by consumers and their behavior of using the online community though it was mediated by consumer needs for health information. Because of the strong impact of it, health information providers should develop a superior physical environment for delivering the service and demonstrating better fulfillment of service delivery. For example, state-of-the-art facilities, up-to-date medical equipment, hospitals and healthcare centers affiliated with their service would provide a superior level of tangible attributes to ensure a high quality of service.

Furthermore, the extent of health communication via social networking sites is not limited only between patients

and healthcare providers. It is also extensively used for communication between healthcare institutes or healthcare providers as well as between healthcare professionals. For example, healthcare providers can retrieve patients' health information that was recorded by other healthcare institutions. This practice is helpful for those who have chronic disease. In addition, healthcare professionals also use social media to communicate with patients and colleagues as well as expand their connections. The social media is often used by different purposes based on different social networking communities. For instance, healthcare professionals usually use Twitter to communicate with their colleagues more than communicate with patients, while use LinkedIn to extend their network within professionals.

The result of this study also showed that the intangible attributes of health information providers via social networking sites directly influence consumer behavioral intentions to accept online health communication. The perceived reliability, capability and customization ability of staff clearly determine levels of the intangible attributes of online health information providers. Therefore, staffing by suitably qualified and experienced staff should remain stable to meet consumer needs in safe, efficient and timely manner. And so, consumers can rest assured that they receive health information in a safe and timely manner that complies with current legislative requirements and safe practice guidelines.

## 6. Conclusion

The findings of this research reflect the success of health information providers via social networking sites, which depends on not only consumer needs for health information, but also the tangible and intangible attributes of online health information providers. In contrast to the recent research under this topic, this paper assimilated some components of the service quality dimensions and consumer behavior theories along with consumer needs for health information to determine behavioral intentions to accept online health communication. This would be a unique contribution of this research.

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## Appendix

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